

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUXOTTICA OF AMERICA INC.,

Petitioner

v.

E-VISION OPTICS, LLC

Patent Owner

Case No. IPR2024-01071

Patent No. 8,905,541

PATENT OWNER'S RESPONSE TO PETITION

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2002	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Order Re Civil Jury/Court Trial, Dkt. 54 (April 4, 2024 C.D. Cal.)
2003	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Order Scheduling Additional Dates and Correcting Scheduling Order, Dkt. 58 (April 18, 2024 C.D. Cal.)
2004	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Lenovo Group, Ltd., et al.</i> , Case No. 8:23-cv-01860 AB (SHK) Defendants' Preliminary Invalidity Contentions (July 19, 2024 C.D. Cal.)
2005	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Defendants' Invalidity Contentions (July 12, 2024 C.D. Cal.)
2006	<i>eVision Optics, LLC and e-Vision Smart Optics, Inc. v. Lenovo Group, Ltd. et al.</i> , Case No. 8:23-cv-01860-AB-SHK, Order re Civil Jury/Court Trial, Dkt. 54 (April 3, 2024 C.D. Cal.)
2007	Lex Machina – Federal Court – Federal District Court Cases in C.D. Cal, Pending Between 2019-09-01 and 2024-09-19
2008	Vacancies in the Federal Judiciary 118th Congress, last updated on 9/23/2024, https://www.uscourts.gov/judges-judgeships/judicial-vacancies/current-judicial-vacancies
2009	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) Order Scheduling Additional Dates and Correcting Scheduling Order, Dkt. 58 (April 18, 2024 C.D. Cal.)
2010	<i>eVision Optics, LLC and e-Vision Smart Optics, Inc. v. Lenovo Group, Ltd. et al.</i> , Case No. 8:23-cv-01860-AB-SHK, Order

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2011	<i>eVision Optics, LLC and Vision Smart Optics, Inc. v. Luxottica Group S.P.A. and Luxottica of America Inc.</i> , Case No. 8:23-cv-02013 AB (SHK) (IN CHAMBERS) Order Continuing Claim Construction Hearing, Dkt. 97 (Oct. 7, 2024 C.D. Cal.)
2012	<i>eVision Optics, LLC and e-Vision Smart Optics, Inc. v. Lenovo Group, Ltd. et al.</i> , Case No. 8:23-cv-01860-AB-SHK, (IN CHAMBERS) Order Continuing Claim Construction Hearing, Dkt. 74 (Oct. 7, 2024 C.D. Cal.)
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2015	Jame D. Oliver Curriculum Vitae
2016	https://museumoffailure.com/exhibition/oakley-thump
2017	https://www.cnet.com/reviews/oakley-thump-review/
2018	https://www.globenewswire.com/news-release/2004/11/15/318738/2175/en/Exclusive-Media-Event-Marks-Debut-of-OAKLEY-THUMP.html
2019	Nugroho, et al. "Understanding and Evaluating User Centered Design in Wearable Expressions"
2020	Wearable Computing – a new approach in Concurrent Enterprising, Conference Paper, June 2006

E-Vision Optics, LLC (“Patent Owner”) submits this Response to the Petition of Luxottica of America Inc. (“Petitioner”) seeking *inter partes* review (“IPR”) of U.S. Patent No. 8,905,541 (“the ‘541 patent”).

I. Introduction

Patent Owner is an innovative research company that develops novel electronic eyeglasses that can provide many benefits to people in need of prescription glasses, individuals who enjoy wearing sunglasses, and users of consumer electronics.

The ‘541 patent claims novel embodiments of electronic eyewear, which incorporate a variety of electrical components, such as a power source, controller, and sensor, into an eyeglass form factor. These electrical components may collectively form an electronics module, which in turn can be contained in a housing module of the electronic eyewear. To address potential short-circuiting and other problems that may occur within the eyeglasses, the ‘541 patent describes an insulating layer placed between the electrical components and the housing module.

Petitioner began providing electronic eyeglasses that, without authorization and despite prior licensing discussions with Patent Owner, implemented Patent Owner's patented technology into its own consumer electronics. Accordingly, on October 16, 2023, Patent Owner filed suit against Petitioner in the United States

District Court for the Central District of California, asserting infringement of the '541 patent and other patents in Patent Owner's portfolio.

The Board should find the challenged claims patentable because the prior art fails, both alone and in combination, to disclose or suggest each limitation recited in the challenged claims. In particular, none of Petitioner's grounds renders obvious the claimed electronic eyewear having an "insulating layer" between the electrical components and eyewear frames—a requirement found in all of claims 1-18 of the '541 patent. Across all petitioned grounds, Petitioner only cites one reference, Howell-158, as allegedly containing an explicit disclosure of the "insulating layer" in the form of double-sided sticky tape.

In **Grounds 1 and 2**, Petitioner first argues that a POSITA would have recognized the advantages of using metal eyewear and implemented Howell-596's eyewear in metal frames, but then argues that a POSITA—recognizing the risk for short circuits and current leakage caused by choosing to use metal frames—would have attempted to reduce such risk by implementing an insulating layer. But a POSITA would not have been motivated to make either of those implementations, because wrapping Howell-596's UV detection system in Howell-158's allegedly insulating double-sided sticky tape would have hindered the ability of the UV detection system to function.

In **Grounds 3 and 4**, Petitioner relies on Howell-596, alone, arguing that the same prior art feature Petitioner identifies as the claimed “electronics module” is also the claimed “insulating layer.” But such an assertion is incorrect as a matter of law. Furthermore, a POSITA would not have seen a need for such insulation, as Howell-596 already discloses methods for protecting electronic components while not impeding the functionality of its UV detection system.

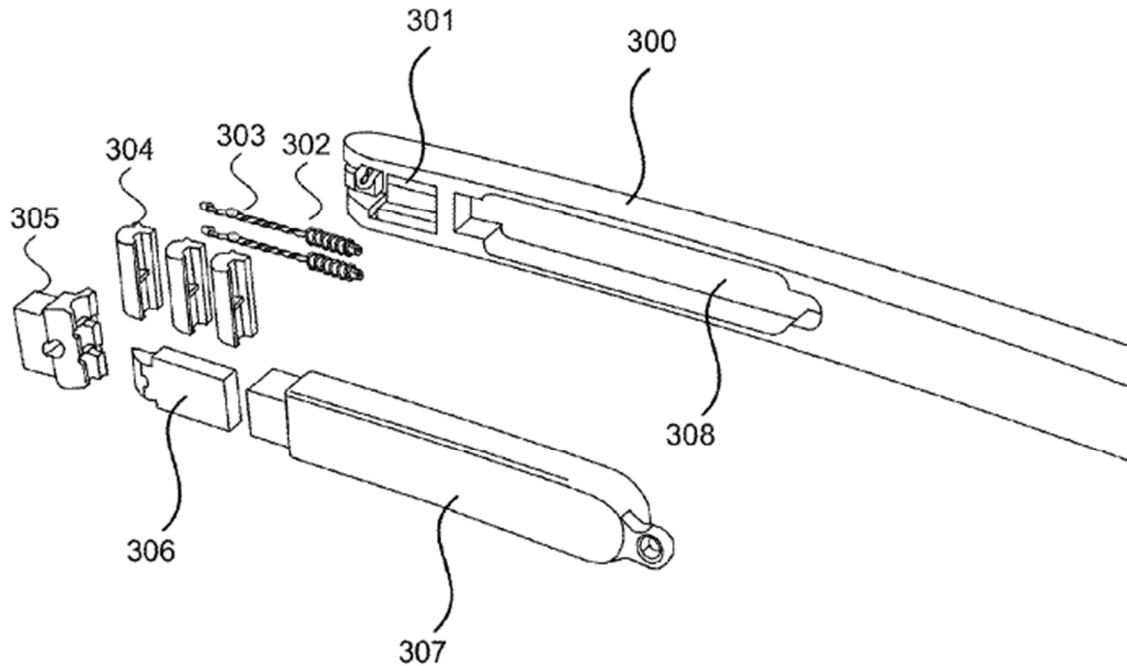
Finally, in **Grounds 5-6**, Petitioner again argues that a POSITA would have implemented Howell-158's double-sided sticky tape in either of two related Kokonaski references, but to do so would be counterproductive to the primary goal of each reference. In the case of Kokonaski-166, wrapping the alleged electronics module in double-sided sticky tape would prevent the module from being removed and easily replaced, nullifying Kokonaski-166's goal. Further, Kokonaski-166 was discussed in detail during prosecution of the '541 patent, and the Examiner allowed the now challenged claims over Kokonaski-166 because it does not teach that entirely metal frames should be used, nor that any metal or other conductive portion of eyeglass frames come into contact with an electronics module. And in the case of Kokonaski-999, the disclosed eyewear frames were explicitly designed to include conductive links that communicate with the alleged electronics module. Were a POSITA to wrap the module in double-sided sticky tape, it would no longer be

capable of communicating with the frame's links, rendering Kokonaski-999's eyewear nonoperational.

Accordingly, the Board should hold that Petitioner has not met its burden and that the challenged claims are patentable.

II. The '541 Patent

The '541 patent is generally directed to electronic eyewear frames, which is a subset of wearable electronics. EX-1001, Abstract; EX-2014 ¶26. As acknowledged in the '541 patent, a major challenge for wearable electronics at the time of the invention of the '541 patent was the need to strike a balance between providing functionality of electronic devices and ensuring comfort and aesthetic qualities of the wearable electronics (in order to advance user acceptance of the electronics) was preserved. EX-2014 ¶26, 30. For example, the electronic eyewear frames disclosed in the '541 patent may include an electronics module, which may be a collection of electronic components, such as a power source, a controller, and a sensing mechanism (such as a capacitive touch switch).



EX-1001, FIG. 3. Due to the highly conductive nature of capacitive touch switches and the risk of electrical interference between the switch and other elements nearby (e.g., other electrical components, electrically conductive elements outside the eyewear such as a human finger, etc.), the '541 patent teaches various ways to minimize the potential for that interference. EX-2014 ¶¶26-28. For example, the '541 patent teaches that a housing module may be formed from a non-conductive material to insulate the electrical components of the electronics module from the structural member of the eyewear. *Id.* at 51:59-52:4; EX-2014 ¶¶29-30.

III. Level of Ordinary Skill in the Art

A POSITA at the time of the invention of the '541 patent would have had a bachelor's degree in mechanical engineering, electrical engineering, or computer engineering, or an equivalent degree and, in addition, approximately two years of work experience with embedded electronic devices. More advanced degrees or training in a related discipline or both can compensate for shorter work experience. (EX-2014, ¶¶31-35.) Patent Owner's expert, Dr. James Oliver, is qualified to offer opinions under this standard and the standard set forth by Petitioner. *Id.*

IV. Overview of the Relevant Prior Art

A. Howell-596

Howell-596 is directed to an “electronic circuit having radiation monitoring capability” which is “provided within eyewear so that the user of the eyewear is able to easily monitor their exposure to radiation.” EX-1004, Abstract. Howell-596 describes this circuit as a UV radiation detection system, because the radiation in question is radiation emitted through light. EX-1004, ¶[0006]; EX-2014 ¶36.

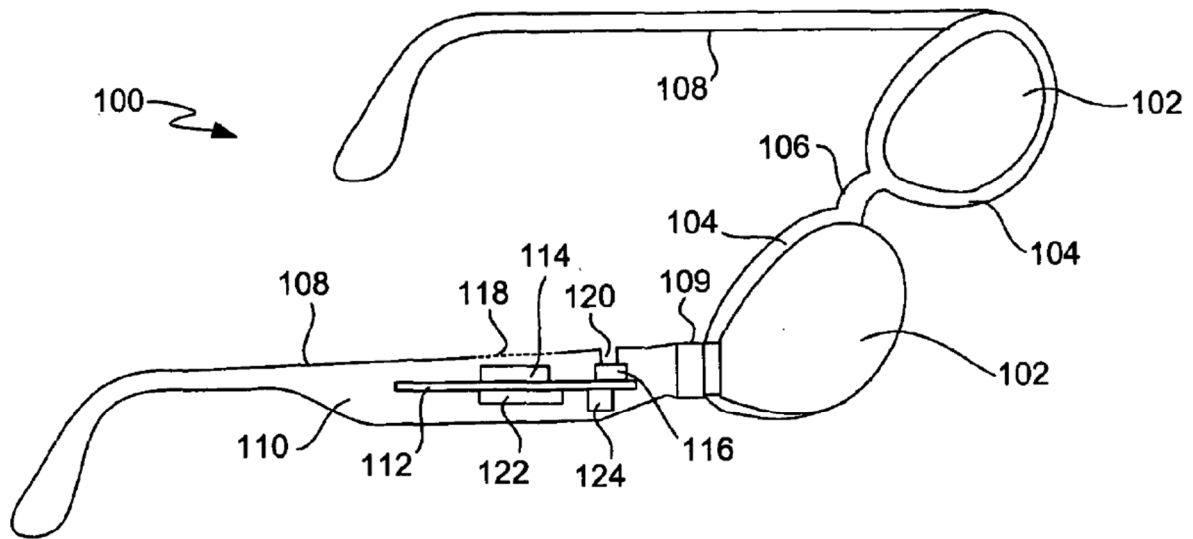


FIG. 1

EX-1004, FIG. 1. For some of its grounds, Petitioner points to the electrical components within module housing 1700 of Howell-596 (depicted in FIG. 17B below, as annotated by Petitioner) as being the claimed “electronics module.” Petition, 19.

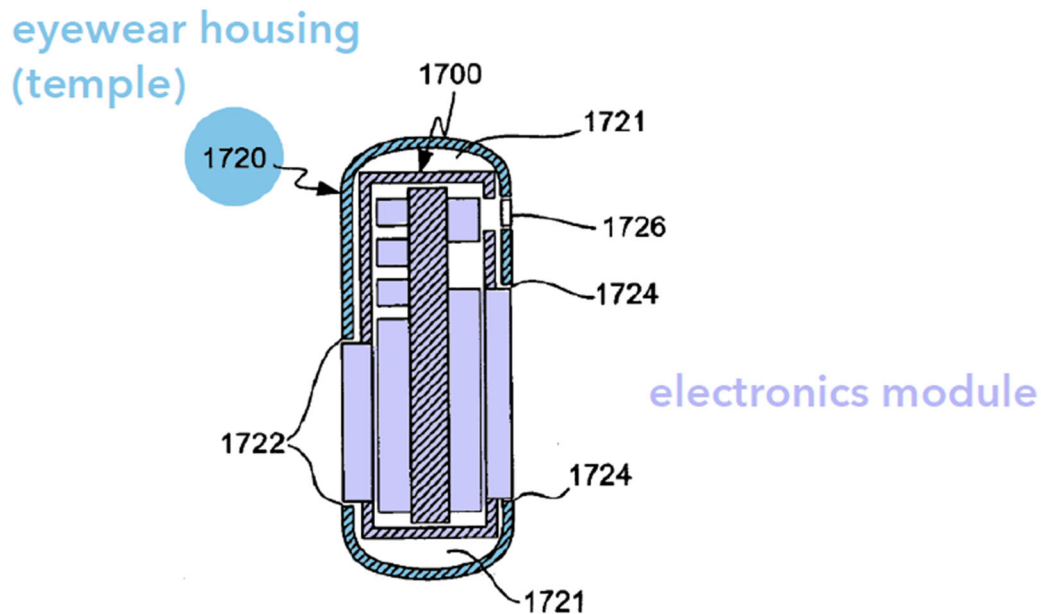


FIG. 17B

Petition, 19 (citing EX-1004, FIG. 17B (annotations in Petition)). Howell-596 notes that the module housing 1700 may protect the module from, for example, water, but “can also be used to regularize or standardize the form factor for the UV detection system.” EX-1004, ¶¶[0194]-[0195]; EX-2014 ¶39. Howell-596 describes several components within the module housing 1700 that need to be present to carry out the desired functionality of the UV detection system.

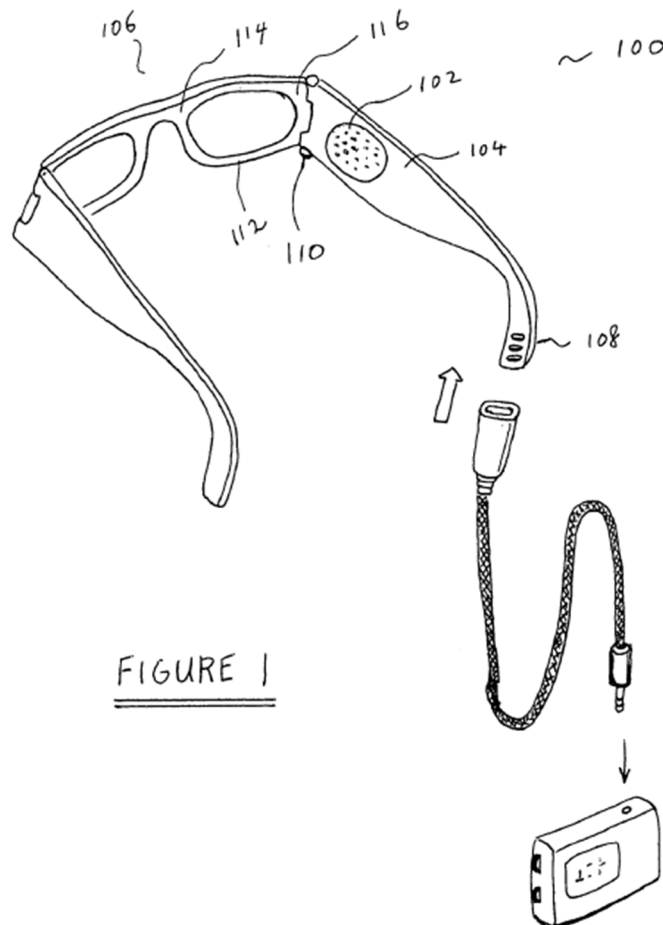
For instance, the UV detection system disclosed in Howell-596 includes a detector (for detecting and measuring light), electrical circuitry (for calculating the light measured by the detector) and an output device (for indicating the UV levels detected by the detector and calculated by the electrical circuitry). EX-1004,

¶[0069]; EX-2014 ¶40. Alternatively, the UV monitoring system can include a phototransistor. *Id.* at [0096]. Because all of this circuitry requires a power source, Howell-596 also discloses that the system includes a battery and/or a solar cell. EX-1004, ¶[0069]; EX-2014 ¶40. Howell-596 also discloses that the UV detection system could include even more components, such as an optical filter (EX-1004 ¶[0078]), additional sensors (e.g., a thermal sensor, motion detector, stress sensor, and/or a switch in addition to the photodetector, *id.* at ¶¶[0078], [0080]), communication circuitry (*id.* at ¶[0078]), a circuit board (*id.* at ¶[0073]), a display device (*id.*), a speaker (*id.* at ¶[0078]), a heart monitor (*id.* at ¶[0091]), and tethering components so that all of these components can be integrated in a single pair of glasses without sacrificing the aesthetics and/or wearability of the eyewear that would be inherent in attempting to package all of these components in one device (*id.* at ¶¶[0007], [0070]). EX-2014 ¶40.

In addition to these components, Howell-596 requires these components to be exposed to the external environment to facilitate the photodetector's reception of inputs in the form of light for determining UV radiation levels. This exposure is implemented using an opening in which the UV detection system and associated components can be exposed to open space. *Id.* at ¶[0075].

B. Howell-158

Howell-158 is directed to eyeglasses having multimedia capabilities. EX-1006, Abstract. For instance, the eyeglasses of Howell-158 include a speaker, an electrical connector, and a storage medium.



EX-1006, FIG. 1. Howell-158 does not disclose any form of sensor that would communicate with the external environment of its eyeglasses, let alone a capacitive touch sensor. *See, generally,* EX-1006. Similar to Howell-596, Howell-158 acknowledges the challenges of packaging multiple electronic components into a

single device such as electronic eyeglasses, and as such discloses that as an alternative to incorporating the electrical components of its multimedia system within the eyeglasses, a tethering mechanism can be used to connect the glasses to separate electronic device. EX-1006, ¶[0013]; EX-2014 ¶43.

Howell-158 includes a single paragraph disclosing eyeglasses with metal frames, as opposed to plastic or some other non-conductive material. EX-2014 ¶44. To account for potential interference between metal frames and electrical components, Howell-158 discloses “an insulating layer” between the metal frames and those electrical components. *Id.*; EX-1006, ¶[0053]. Howell-158 discloses that this “insulating layer” may be tape, which can play one of two distinct roles: insulation or mechanical stiffness. *Id.*; EX-1006 ¶[0053]. Howell does not disclose that an insulating layer would be necessary under any other circumstance. *See, generally*, EX-1006 ¶[0053].

C. Kokanaski-166

Kokanaski-166 is directed to eyeglasses including electro-active lenses. EX-1008, Abstract. Kokanaski-166 explains that a primary purpose of its disclosed invention is to provide “a cosmetically pleasing manner that allows a platform of frame systems to be built from a single electronic module.” *Id.*

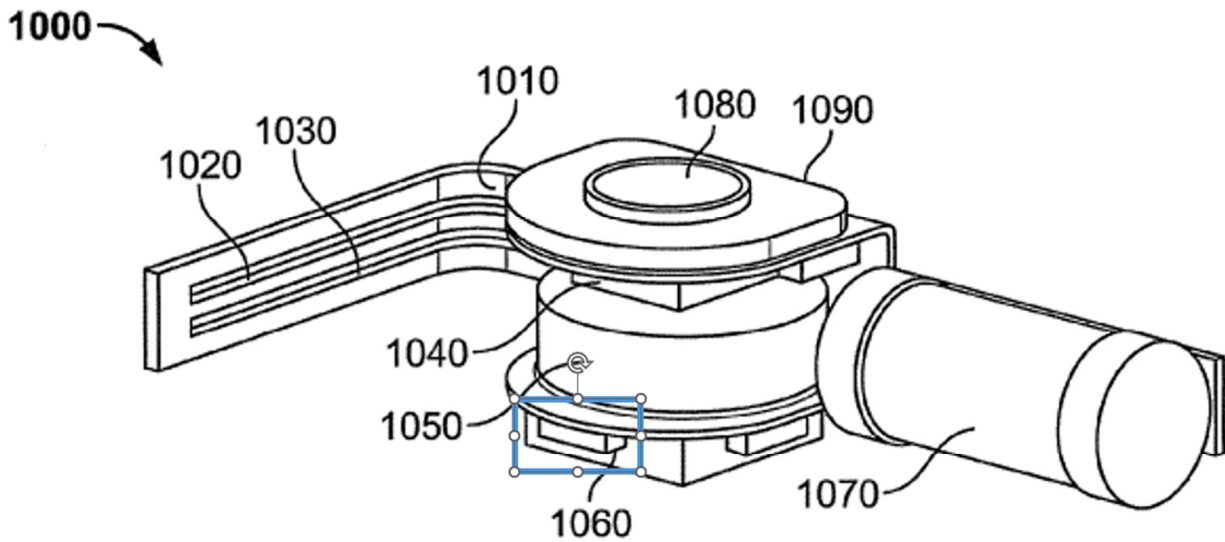
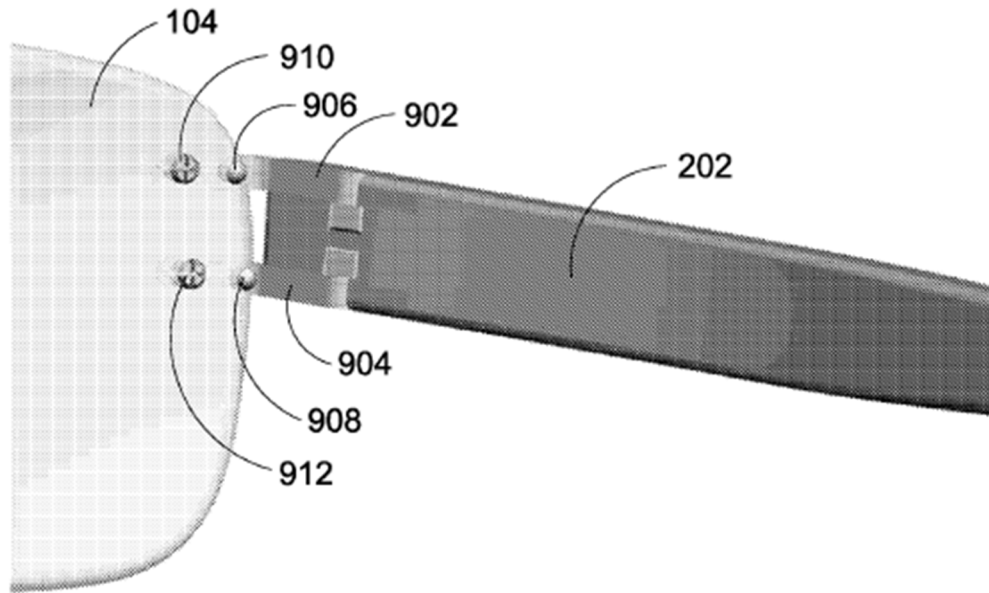


FIG. 10

EX-1008, FIG. 10. Kokonaski-166 discloses frames that can partially include metal. *Id.* at ¶[0084]. Kokonaski-166 also discloses electronics that include an inductively chargeable battery. *Id.* at ¶[0087]. To ensure protection from aqueous environmental elements, Kokonaski-166 also teaches that a silicone seal may be selectively placed in the electronics module, but only to a limited extent to provide water resistance to the module while not impeding the ability of the inductively rechargeable battery to be recharged. *Id.*; EX-2014 ¶46.

D. Kokonaski-999

Kokonaski-999 is directed to “electronics for controlling and synchronizing operation of electro-active lenses.” EX-1009, Abstract.



EX-1009, FIG. 9. Kokonaski-999 further describes “electronics for controlling and synchronizing operation of electro-active lenses that can be housed in any type of frame in a cosmetically acceptable and easily implementable manner.” *Id.* at ¶[0004]. Kokonaski-999 further teaches the use of conductive portions of an eyeglass frame to facilitate the functionality of electronics contained therein. *Id.* at ¶¶[0032], [0035]; EX-2014 ¶48.

V. Petitioner Fails to Show that the Cited References Render the Challenged Claims Unpatentable

Petitioner fails to establish that the asserted grounds render obvious every limitation of the challenged claims. “In an *inter partes* review, the burden of persuasion is on the petitioner.... Failure to prove the matter as required by the applicable standard means that the party with the burden of persuasion loses on that

point—thus, if the fact trier of the issue is left uncertain, the party with the burden loses.” *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378-79 (Fed. Cir. 2015).

The ’541 patent has two claim sets—independent claim 1 and its dependent claims 2-18 and independent claim 19, from which no other claims depend. A majority of the claims are challenged by three base combinations of references: (1) Howell-596, alone, or in combination with Howell-158 (Grounds 1-4); (2) Kokonaski-166 in view of Howell-158 (Ground 5); and (3) Kokonaski-999 in view of Howell-158 (Ground 6). Hattori-913 is used in two grounds to challenge only dependent claims 16-17.

Ground	Reference(s)	Basis	Challenged Claims
1	Howell-596, Howell-158	Obviousness	1-19
2	Howell-596, Howell-158, Hattori-913	Obviousness	16-17
3	Howell-596	Obviousness	1-11, 13-19
4	Howell-596, Hattori-913	Obviousness	16-17
5	Kokonaski-166, Howell-158	Obviousness	1-9, 11, 13-19
6	Kokonaski-999, Howell-158	Obviousness	1-9, 11, 13-19

Petition, 13.

That is, all of Petitioner's grounds rely on either Howell-596 or Howell-158 as allegedly rendering obvious key limitations of all challenged claims—in particular, the claimed “*insulating layer*” required by claims 1-18. The deficiencies in Petitioner's assertion that a POSITA would have found it obvious to implement an insulating layer within the context of the asserted combinations, therefore, pervades each of Petitioner's grounds. And for particular dependent claims, the alleged resulting combination—even if it were obvious to a POSITA (which it is not)—fails to disclose each limitation of the challenged claim.

Accordingly, Petitioner fails to meet its burden in establishing that the challenged claims were obvious.

A. Ground 1: Claims 1-18 are Patentable over Howell-596 in view of Howell-158

1. Claim 1 Is Patentable

Petitioner fails to show that the combination of the cited references renders obvious claim 1 of the '541 patent, because a POSITA would not have been motivated to implement Howell-158's alleged disclosure of an insulating layer within the context of Howell-596.

Claim 1 is reproduced below, with the relevant claim limitation not rendered obvious in bold and italics:

1. A first device, comprising:

a frame comprising a first temple and a second temple, wherein the frame comprises a housing module coupled to a structural member; a first lens and a second lens coupled to the frame; and an electronics module, wherein the electronics module is located within the housing module; wherein the electronics module comprises at least any two of: a power source; a controller; and a sensing mechanism; and *wherein an insulating layer is disposed between one or more electronic components located within the electronics module and the frame of the first device.*

Petitioner relies on Howell-596 as allegedly disclosing all limitations of claim 1, except for the required “*insulating layer*.” Petition, 15-21. It then relies on a single paragraph from Howell-158 as allegedly disclosing an insulating layer in the form of “double-sided sticky tape, with one side sticking to the circuit board, and the other side sticking to the temple.” Petition, 22 (quoting EX-1006, ¶53); EX-2014 ¶52. Petitioner argues that a POSITA would have been motivated to “apply Howell-158’s insulating layer between the electronics and other components located within Howell-596’s electronics module and its frame.” Petition, 22. Petitioner does not specify how such tape would be applied—for example, whether it would be applied between the circuit board and module, between the module and the housing, or between the housing and the frames. EX-2014 ¶53. Given Howell-158’s teaching

that such tape is applied directly to the circuit board, one assumes that Petitioner relies on the same implementation, and Petitioner provides no explanation for modifying that teaching. *Id.*

Petitioner provides only two bases to support its assertion that a POSITA would have combined Howell-158's and Howell-596's teachings: (1) that Howell-158 allegedly suggests such a combination of Howell-596 and Howell-158 (Petition, 22); **and** (2) that it would have been obvious to construct Howell-596's glasses frames from metal, only after which, it would then have been obvious to insulate the electrical components from the metallic frames (Petition, 22-24).

Petitioner overreaches in its assertion that Howell-158 "expressly instructs the POSITA to combine the disclosures of the two references." Petition, 22; EX-2014 ¶52. Howell-158 identifies Howell-596's application as one of two dozen related applications, all of which are incorporated by reference. EX-1006 ¶¶1-3. Howell-596 also generally discloses an unusually large number of possible embodiments, one of which is metal and one of which may include a sensor, which may sense a variety of different environmental conditions, one of which is UV radiation. *Id.*, ¶¶18, 167. But none of Petitioner's cited evidence "expressly instructs" the POSITA to combine Howell-158's and Howell-596's teachings, and certainly nothing instructs a POSITA to particularly implement Howell-158's teachings of metal

frames and double-sided tape in Howell-596's particular eyewear. *See generally* EX-1006; EX-2014 ¶52.

In fact, that Howell-158 incorporates by reference Howell-596 raises the question—since both of these references were available to the named inventors on Howell-596 and Howell-158, why does neither reference describe Petitioner's combination, and why is there no cited reference among the plethora of prior art references within the patent family of Howell-158 and Howell-596 that teaches and describes Petitioner's combination? EX-2014 ¶52.

The answer is that these references did not teach Petitioner's proposed combination, because (1) Petitioner invents an insulation problem where none exists; and (2) Howell-158's use of double-sided tape is incompatible with Howell-596's UV detection module. EX-2014 ¶¶52-53.

Petitioner contends that incorporating Howell-158's double-sided tape into Howell-596's eyewear may “prevent circuits from being shorted” and “reduce leakage current.” Petition, 22-23 (citing EX-1006 ¶53; EX-1002 ¶66). But Howell-596 does not have this problem unless a POSITA first implements Petitioner's proposal of implementing Howell-596's system in metal frames, because Howell-596 does not teach use of metal frames. *See generally* EX-1004; EX-2014 ¶55.

Petitioner also argues that because insulation has been used in electrical systems generally, it would have been obvious to a POSITA to simply insert some into Howell-596. Petition, 23. But the petition itself acknowledges that such a practice was standard to insulate electronics from “*metal-cased components.*” Petition, 23. This illustrates the flaw in Petitioner’s reasoning – its suggestion that a POSITA would have engaged in a series of cascading errors, needlessly incorporating metal frames into Howell-596, realizing that doing so increased the risk of short circuits and leakage current, and then fixing the problem they created by adding an insulating layer. EX-2014 ¶¶53-55.

Howell-158 discloses three materials (metal, plastic, and rubber) for making its eyeglass frames. Petitioner’s argument that a POSITA would have been motivated to use metal frames in Howell-596 (Petition, 23-24) is undercut by the very disadvantages of metal that Petitioner highlights in arguing a POSITA would have implemented an insulating layer (Petition, 22-23; EX-2014 ¶55). That is—as Petitioner acknowledges—a POSITA would have understood that a metal casing or frame may impede the UV detection system by creating a risk of electrical components contacting the frame and short circuiting. EX-1003, 65; Petition, 22-23; EX-2014 ¶¶53-55. Accordingly, a POSITA would not have been motivated to implement Howell-596’s eyewear in metal frames.

Indeed, Howell-596's silence as to metal frames (or metal housing, for that matter) is not an oversight, because the insulation Petitioner proposes is incompatible with Howell-596's UV detection system. EX-2014 ¶¶53-57. If a POSITA were to implement the insulating layer as Petitioner proposes, it would defeat the entire purpose of Howell-596. *Id.* at ¶55. While some sensors are highly sensitive and need a protective, insulating layer (as explained and claimed in the '541 patent), Howell-596's UV detection sensor is not one of them. In fact, it is the opposite; the UV detection system needs maximum exposure to its surroundings so that it can absorb as much light as possible to determine UV radiation levels. EX-1004, ¶¶[0189], [0194]-[0196], [0203]-[0206]. For example, in one embodiment, Howell-158 discloses windows that could enclose the UV detection system while still allowing light to pass through the window to the UV detection system. EX-1004, ¶[0198]; EX-2014 ¶¶56. In fact, Howell-158 states that "a number of previously described transparent regions, portions, or sheets of material ... can be translucent (or partially translucent). Still another alternative is that the eyewear housing 1800 could be primarily translucent." EX-1004, ¶[0199]; EX-2014 ¶¶56-57. If a POSITA were to apply double-sided sticky tape to the electrical circuit board, as Howell-158 teaches, the UV sensors would no longer be capable of performing

the primary function Howell-596 sought to achieve—i.e., capturing light and detecting UV radiation. EX-2014 ¶¶55-56.

In addition to creating an inoperable pair of eyewear, Petitioner's arguments do not address the additional problems that it leaves unaddressed – accounting for the added weight, complexity, and components added to a pair of electronic eyeglasses that require exposure to light for the UV detection system to work, all while ensuring the aesthetics of the design are not compromised. Petition at 22-23; EX-2014 ¶¶54-55. Howell-596 is directed to a UV radiation detection system. This system includes several electronic components. EX-1004, ¶¶[0010]-[0011]. In light of the sheer magnitude of electronic components that would need to be implemented in the device disclosed by Howell-158, as well as the need for eyewear to be comfortably worn by a user, a POSITA would aim to minimize the weight and number of components added to the eyewear, not overload it by adding even more components disclosed in Howell-596, as suggested by Petitioner. EX-2014 ¶¶54-55. In fact, Howell-158 aims for its UV detection system to have a “minimal impact on design of the end product and no tedious wiring is required.” EX-1004, ¶¶[0183]-[0184]; EX-2014 ¶¶53-55.

Furthermore, a POSITA would not have been motivated to incorporate an insulating layer into Howell-596 when the construction of Howell-596's eyewear

negates the need for such insulation. EX-2014 ¶¶53-56. For example, Howell-596 discloses an embodiment with “one or more vents or holes so that air can circulate through the module housing 1700.” EX-1004, ¶[0194]; EX-2014 ¶56. This is similar to an unclaimed, alternative embodiment described in the '541 patent, which notes that an air gap could be incorporated instead of an insulating layer. EX-1001, 22:20-35; EX-2014 ¶¶56-57.

As another example, Howell-596 describes placing its electrical components in fixed positions, minimizing the risk of conductive portions colliding during use in a way that would cause those conductive portions to short circuit one another. Specifically, Howell-596 provides that the electrical components forming the UV detection system are mounted or wire bonded onto a substrate such as the printed circuit board relied upon by Petitioner, rather than being loosely connected by wires, and therefore would not need further insulation between electrical components because they would already be separated. EX-1004, ¶[0184]. Howell-596 also teaches that this approach would serve Howell-596 goals of “maintain[ing] a thin profile for the UV detection system.” *Id.*; EX-2014 ¶57. Such methods for printed circuit board design were well known in the art, and—unlike the addition of an insulating layer—would not contradict Howell-596's goal of a thin profile. EX-1011, 17, 64; EX-1004, ¶¶[0194]-[0206].

Finally, Howell-596 also discloses a module housing that protects the UV detection system while still allowing for the UV sensor to be open to the environment, further obviating the need for an insulating layer between the electrical components (including the sensor) and the eyeglass frame. EX-1004, ¶¶[0194]-[0195]; EX-2014 ¶57. That is, the UV detection system would not come into contact with the frame or housing of the eyeglasses. Accordingly, a POSITA would not have seen a need and would not have been motivated to incorporate an insulating layer in Howell-596. EX-2014 ¶¶50-58.

Because the cited combination of teachings does not render obvious the claimed “*insulating layer*,” independent claim 1 is patentable over the prior art.

2. Claim 2: “The first device of claim 1, wherein the housing module comprises the insulating layer.”

Claim 2 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 2 is also patentable over that combination.

3. Claim 3: “The first device of claim 2, wherein the electronics module comprises a conductive material.”

Claim 3 depends from claim 2, and therefore incorporates all of the limitations of claims 1 and 2 in addition to the limitations recited therein. Accordingly, for the

same reason claims 1 and 2 are patentable over Howell-596 in view of Howell-158, claim 3 is also patentable over that combination.

4. **Claim 4: “The first device of claim 1, wherein the housing module comprises a conductive material; and wherein the insulating layer is disposed between at least a portion of the housing module and the electronics module.”**

Claim 4 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 4 is also patentable over that combination.

5. **Claim 5: “The first device of claim 1, wherein the insulating layer comprises a portion of the electronics module.”**

Claim 5 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 5 is also patentable over that combination.

6. **Claim 6: “The first device of claim 5, wherein the housing module comprises a conductive material.”**

Claim 6 depends from claim 5, and therefore incorporates all of the limitations of claims 1 and 5 in addition to the limitations recited therein. Accordingly, for the same reason claims 1 and 5 are patentable over Howell-596 in view of Howell-158, claim 6 is also patentable over that combination.

7. Claim 7: “The first device of claim 1, wherein the electronics module is removably coupled to the housing module.”

Claim 7 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 7 is also patentable over that combination.

8. Claim 8: “The first device of claim 7, wherein the electronics module is adapted to be removed and recoupled to the housing module.”

Claim 8 depends from claim 7, and therefore incorporates all of the limitations of claims 1 and 7 in addition to the limitations recited therein. Accordingly, for the same reason claims 1 and 7 are patentable over Howell-596 in view of Howell-158, claim 8 is also patentable over that combination.

9. Claim 9: “The first device of claim 1, wherein the housing module comprises a first end, a second end, and a body disposed between the first end and the second end; wherein the first end comprises an opening; and wherein the electronics module is configured to be inserted into the opening.”

Claim 9 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 9 is also patentable over that combination.

10. Claim 10: “The first device of claim 9, wherein the electronics module is pressure fitted to the housing module.”

Claim 10 depends from claim 9, and therefore incorporates all of the limitations of claims 1 and 9 in addition to the limitations recited therein. Accordingly, for the same reason claims 1 and 9 are patentable over Howell-596 in view of Howell-158, claim 10 is also patentable over that combination.

11. Claim 11: “The first device of claim 9, wherein the electronics module is located within the body of the housing module.”

Claim 11 depends from claim 9, and therefore incorporates all of the limitations of claims 1 and 9 in addition to the limitations recited therein. Accordingly, for the same reason claims 1 and 9 are patentable over Howell-596 in view of Howell-158, claim 11 is also patentable over that combination.

12. Claim 12: “The first device of claim 1, wherein the structural member comprises a cavity in the first temple; and wherein the housing module is configured to be selectively placed within the cavity.”

Claim 12 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited in claim 12. In challenging claim 12, Petitioner relies on different prior art elements as allegedly meeting the requirements of independent claim 1, as compared to the other claims within the first claimset. A comparison of Petitioner's different mappings of prior art to claim limitations is provided below:

Petitioner's Mapping of Claim 1		Petitioner's Mapping of Claim 12	
Claim 1 element	Howell-596	Claim 12 element	Howell-596
"frame"	Frame 100	"frame"	Frame 100
"housing module"	Housing 1720	"housing module"	Housing 1700
"structural member"	Any portion of frame 100	"structural member"	Housing 1720
"electronics module"	Housing 1700	"electronics module"	"insulating layer" of Howell-158
"insulating layer"	"insulating layer" of Howell-158	"insulating layer"	

See Petition, 33-34.

But Petitioner's challenge of claim 12 is deficient on its face, as Petitioner does not attempt to explain (1) how the proposed combination of teachings renders obvious independent claim 1's limitation, "*an insulating layer...disposed between one or more electronic components located within the electronics module and the frame of the first device;*" or (2) how or why a POSITA would have implemented Howell-158's teachings within the context of Howell-596. See Petition, 33-34.

Petitioner now relies on the "insulating layer" of Howell-158 as allegedly disclosing the "electronics module" limitation of claim 12 (Petition, 34), but does not address what constitutes the "insulating layer." See Petition, 33-34. Even if the Board were to assume that Petitioner meant to argue that the insulating layer meets both the electronics module and the insulating layer limitations (which Petitioner does not assert), "[t]he Federal Circuit's case law 'instructs that different claim terms

are presumed to have different meanings.” *Wanker v. United States*, 152 Fed. Cl. 219, 228 (2021) (citations omitted). Accordingly, Petitioner has not met its burden in demonstrating that the proposed combination renders obvious all limitations of dependent claim 12 and the limitations of independent claim 1 from which it depends. Claim 12 is patentable.

Petitioner's challenge of claim 12 also fails because—while Petitioner relies on Howell-158's purported disclosure of an insulating layer, Petitioner does not explain how or why a POSITA would have been motivated to combine Howell-158's teachings with Howell-596. EX-2014 ¶¶59-64. Petitioner merely recites Howell-158's teaching of “encapsulat[ing]” Howell-158's electrical components within dielectric tape. Petition, 34; EX-2014 ¶61. But, as previously discussed with respect to claim 1, Howell-158's teaching is specific to implementing the double-sided sticky tape in “glasses with metallic frames” and contemplates “sandwich[ing]” the encapsulated circuit board between two metal temple faces that are glued together. EX-1006, [0053]; EX-2014 ¶¶61-64. Petitioner does not explain how or why a POSITA would have encapsulated the UV detection system of Howell-596 at all, let alone doing so without interfering with the UV detection system's various components that need direct access to the external environment and therefore cannot be “encapsulated.” See Section V(A)(1), *supra*. Further, because Howell-596

describes UV detection system as being a standalone device that can be inserted into the electronic eyeglasses disclosed therein (EX-2014 ¶¶62-63), Petitioner fails to explain how a POSITA would have understood dielectric tape to be a suitable means for “encapsulating” the UV detection system while providing “mechanical stiffness” as a standalone device.

Even if Petitioner were to attempt to rely on its motivation to combine arguments under its challenge of claim 1—which is based on a different arrangement of prior art elements—a POSITA would not have been motivated to encapsulate Howell-596's UV detection system 1500 in double-sided sticky tape before placing it into the module housing 1700 and, in turn, placing that module housing 1700 within eyewear housing 1720. EX-2014 ¶¶62-63. Petitioner identifies no need for—and a POSITA would not have understood a need to exist for—yet another layer of protection for the UV detection system.

Petitioner has not proposed the use of metal frames in its combination asserted against claim 12, but even if it had, a POSITA would not have been motivated to implement Howell-596's system within metal frames for the same reasons discussed above in Section V(A)(1), *supra*. And while Petitioner has not identified any element of Howell-158 as the claimed “*insulating layer*” or made any argument as to why a POSITA would implement an insulating layer that also serves as a module, Patent

Owner has already explained why a POSITA would not see a need for insulation in Howell-596 and why encapsulating the UV detection system in double-sided sticky tape would only impede the system's ability to capture and detect UV radiation. *See* Section V(A)(1), *supra*. Accordingly, Petitioner has not met its burden in establishing that the cited prior art references render obvious claim 12.

13. Claim 13: “The first device of claim 1, wherein the housing module further comprises an aperture disposed on an outer side of the housing module.”

Claim 13 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 13 is also patentable over that combination.

14. Claim 14: “The first device of claim 13, wherein the sensing mechanism comprises a touch sensitive switch exposed substantially through the aperture.”

Claim 14 depends from claim 13, and therefore incorporates all of the limitations of claims 1 and 13 in addition to the limitations recited therein. Accordingly, for the same reason claims 1 and 13 are patentable over Howell-596 in view of Howell-158, claim 14 is also patentable over that combination.

15. Claim 15: “The first device of claim 14, wherein the touch sensitive switch is a capacitance switch.”

Claim 15 depends from claim 14, and therefore incorporates all of the limitations of claims 1, 13, and 14 in addition to the limitations recited therein. Accordingly, for the same reason claims 1, 13, and 14 are patentable over Howell-596 in view of Howell-158, claim 15 is also patentable over that combination.

16. Claim 16: “The first device of claim 1, wherein the structural member comprises the first temple.”

Claim 16 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 16 is also patentable over that combination.

17. Claim 17: “The first device of claim 16, wherein the first temple comprises a first portion and second portion, and wherein the housing module comprises the first portion of the first temple.”

Claim 17 depends from claim 16, and therefore incorporates all of the limitations of claims 1 and 16 in addition to the limitations recited therein. Accordingly, for the same reason claims 1 and 16 are patentable over Howell-596 in view of Howell-158, claim 17 is also patentable over that combination.

18. Claim 18: “The first device of claim 1, wherein the housing module has a thickness that is less than or equal to approximately 0.7 mm.”

Claim 18 depends from claim 1, and therefore incorporates all of the limitations of claim 1 in addition to the limitations recited therein. Accordingly, for the same reason claim 1 is patentable over Howell-596 in view of Howell-158, claim 18 is also patentable over that combination.

In addition, Petitioner's challenge to claim 18 fails because it points to nowhere in Howell-596 or Howell-158 in which the limitation “wherein the housing module has a thickness that is less than or equal to approximately 0.7 mm” exists. Rather, Petitioner simply disparages the value of such a limitation. This has no merit in an obviousness analysis, and Petitioner provides no evidence that a POSITA would have been motivated to combine or modify Howell-596 or Howell-158 as recited in claim 18. In fact, the Federal Circuit has “never before applied the presumption of obviousness for overlapping ranges in a case in which the prior art does not contain an express disclosure of a range.” *ModernaTx, Inc. v. Arbutus Biopharma Corp.*, 18 F.4th 1364, 1373 (Fed. Cir. 2021). Petitioner does not argue that Howell-596 or Howell-158 discloses the claimed range.

The little evidence that Petitioner provides does not even relate to electronic eyewear. In fact, Petitioner argues that “multiple references,” neither of which are

Howell-596 or Howell-158, “disclosed temples whose entire widths were less than approximately 0.7mm thick.” Petition, 42 (citing EX-1002 and EX-1013). In fact, both of these “multiple references” (Dudli and Della) disclose spectacles having no electrical components whatsoever. EX-2014 ¶¶65-66. As such, Dudli and Della appear to be completely irrelevant to the subject matter of claim 18, especially given that Petitioner provides no evidence (or argument) that a POSITA would have been motivated to use either these two references to modify the combination that Petitioner proposed regarding claim 1 for Howell-596 and Howell-158. *Id.* In fact, Petitioner says nothing about why or how a Petitioner would have used the frames of the non-electronic eyewear or Dudli or Della to construct a housing module for the electronic eyewear of claim 18.

Petitioner's vague motivation to combine belies its motivation to combine Howell-596 with Howell-158. Petitioner argues that minimizing housing module thickness as proposed in Dudli and Della would “maintain design ergonomics and aesthetics of the electronic eyewear,” but then directly contradicts this by positing that a POSITA would have opted for incorporating all of the electrical components of the UV detection system of Howell-596, housed those components needlessly in a metal frame that could interfere with the functionality of the UV detection system, then apply an insulating layer to the UV detection system. *Id.* at 67. This combination

proposed by Petitioner is not only internally inconsistent, but also in direct contradiction to the evidence cited by Petitioner, which notes a desire to avoid “a thick temple or frame housing electronics that distracts from the aesthetic appearance of the eyeglass frames.” Petition, 43 (citing EX-1008, ¶6); EX-2014 ¶67. Accordingly, Petitioner does not meet its burden to establish that claim 18 is obvious in view of the cited prior art.

B. Ground 2: Claims 16 and 17 are Patentable Over Howell-596, Howell-158, and Hattori-913

Petitioner's Ground 2 relies on Ground 1, specifically Petitioner's contention that claim 1 of the '541 patent is obvious over Howell-596 in view of Howell-158. Petitioner only relies on the addition of a third reference – Hattori-913 – to argue that the additional limitations recited in claim 16 (which depends from claim 1) and claim 17 (which depends from claim 16) are obvious. Since Petitioner fails to establish that the prior art renders obvious all limitations of claim 1, Petitioner's challenge of dependent claims 16 and 17 also fails for the same reasons set forth in **Section V.A.1.**

C. Ground 3: Howell-596 Alone Does Not Render Obvious Claims 1-11 or 13-19

1. Independent Claim 1

With respect to Ground 3, Petitioner deviates from Ground 1 (asserting that Howell-596 would have been obvious by incorporating a metal frame and insulating

layer of Howell-158) and argues that Howell-596 alone would have rendered the Challenged Claims obvious. Petition, 47-49.

Petitioner relies on an embodiment described in the specification of the '541 patent that states that the housing of an electronics module may constitute the insulating layer in order to argue that it would have been obvious for a POSITA “to select an insulating material for module housing 1700.” Petition, 48. Petitioner also reiterates its prior arguments set forth in Ground 1, such as the general existence of insulation in electrical circuits (Petition, 48) and Howell-158's general teaching that plastic may be used for insulation of electrical components (Petition, 49).

First, Petitioner effectively makes a claim construction argument that is inconsistent with many of the arguments included in the petition—i.e., that the claimed “electronics module” and claimed “insulating layer” may be one and the same. Petition, 47. However, Patent Owner disclaimed this embodiment during prosecution when it noted that the prior art cited by the Examiner—which was formed of a non-conductive material to prevent short circuit—did not disclose or require the claimed “insulating layer” element.

Specifically, during prosecution of the '541 patent, the Examiner found the pending claims unpatentable as anticipated by Kokanaski-166. EX-1003, 76-77 (“Regarding claim 49, Kokanaski et al discloses the insulating layer between the

electronic components and frame [and] implicitly states otherwise there would be short circuit, the wires can have insulating material.”). In response to this rejection, the applicant argued that the insulating layer was not taught by Kokonaski:

Kokonaski does not disclose each and every feature recited by independent claim 48, as amended. The Office attempts to rely on the theory that the features are "implicitly" disclosed, suggesting that "the wires *can have* insulating material." So the Office acknowledges this is merely one "possibility", which is insufficient to satisfy the standard quoted above. The Office does not show that the missing feature is "necessarily present", as required. ***Indeed, there are other ways in which Kokonaski could prevent a short circuit. For example, if the frame is not electrically conductive, the components of the electronics module could contact the frame without creating a short circuit.*** Thus, Kokonaski does not require the claimed elements.

Id. at 66 (emphasis added).

Consistent with this unclaimed approach, Howell-596 describes a UV detection system installed on a pair of electronic eyeglasses. Nowhere in its 65-page, 240-paragraph disclosure does Howell-596 describe any embodiment consistent with a metal frame. As Petitioner admits, plastic materials were known in the art for building eyeglass frames, and such a material would obviate a need for an insulating layer between the electronics module and the frame. Petition, 49; *see also* EX-1004, ¶183 (“Advantageously, in one embodiment, the UV detection system is such that has minimal impact on design of the end product and no tedious wiring is required.”).

Second, even if Petitioner's reliance on the same prior art element for two distinct limitations was appropriate, a POSITA's general knowledge that plastic may be used to insulate electrical components does not explain why a POSITA would have been motivated to specifically use plastic for module housing 1700, as opposed to some other material or some other component.

Furthermore, as explained in detail under Ground 1, a POSITA would not have needed to implement the teachings of Howell-158, because Howell-596 already contemplates its own solutions for protecting the electrical components of its UV detection system, and a POSITA would not have seen any need for an insulating layer in Howell-596's eyewear, particularly where it would nullify the very purpose of the eyewear. *See* Section V(A)(1), *supra*.

Accordingly, Howell-596 does not render obvious all limitations of independent claim 1.

2. Dependent Claims 2-11 and 13-19

Because claims 2-11 and 13-19 depend from independent claim 1, and Petitioner has not met its burden to show that the cited prior art renders obvious all limitations of independent claim 1, claims 2-11 and 13-19 are also not rendered obvious.

D. Ground 4: Claims 16-17 are Patentable Over Howell-596 and Hattori-913

Petitioner's Ground 4 relies on Ground 3, specifically Petitioner's contention that claim 1 of the '541 patent is obvious over Howell-596. Petitioner only relies on the addition of a third reference – Hattori-913 – to argue that the additional limitations recited in claim 16 (which depends from claim 1) and claim 17 (which depends from claim 16). Since the Petition fails to establish that claim 1 is rendered obvious by the cited prior art, dependent claims 16 and 17 are therefore patentable for the same reasons set forth in **Sections V.A.1 and V.B.**

E. Ground 5: Claims 1-9, 11, and 13-19 are Patentable Over Kokonaski-166 in View of Howell-158

1. Independent Claim 1

Petitioner's challenge under Ground 5 once again fails to disclose or render obvious the claimed "*insulating layer*" of independent claim 1.

Petitioner argues that (1) Kokonaski-166 discloses an insulating layer; or (2) alternatively, based on the same reasons it discusses under Ground 1, a POSITA would have been motivated to implement Howell-158's alleged disclosure of an insulating layer within Kokonaski-166. Petition, 57.

First, in arguing that Kokonaski-166 discloses an insulating layer, Petitioner merely asserts an argument previously rejected by the patent office. Kokonaski-166 was specifically discussed during prosecution of the '541 patent, and the applicant

successfully argued that the claimed insulating layer was not taught by Kokonaski-166:

Kokonaski does not disclose each and every feature recited by independent claim 48, as amended. The Office attempts to rely on the theory that the features are "implicitly" disclosed, suggesting that "the wires *can have* insulating material." So the Office acknowledges this is merely one "possibility", which is insufficient to satisfy the standard quoted above. The Office does not show that the missing feature is "necessarily present", as required. ***Indeed, there are other ways in which Kokonaski could prevent a short circuit. For example, if the frame is not electrically conductive, the components of the electronics module could contact the frame without creating a short circuit.*** Thus, Kokonaski does not require the claimed elements.

Id. at 66 (emphasis added). As previously recognized, the mere fact that Kokonaski-166 teaches the possibility of a metal frame does not mean that Kokonaski-166 necessarily discloses an insulating layer. EX-2014 ¶80.

Petitioner's reliance on Kokonaski-166 as disclosing a silicone "insulating layer" is also flawed for several reasons. First, Petitioner provides no evidence that silicone constitutes an insulating layer other than the bare allegation that it is often "insulative," and Petitioner provides no evidence that the silicone described in Kokonaski-166 is actually a layer disposed between one or more electrical components in the electronics module and the frame, as opposed to just one of many components within the electronic device of claim 1. Petition, 56-57; EX-2014 ¶81. In fact, Petitioner's expert declaration, which improperly recites the arguments in

the Petition verbatim without any additional technical analysis, cites to no evidence that silicone is insulative, despite claiming that “[l]ong before the priority date, a POSITA would have known that silicone is an insulative material.” EX-1002, ¶162. Petitioner’s unsupported allegations therefore should be given little weight. *Xerox Corp. v. Bytemark, Inc.*, No. IPR2022-00624, 2022 WL 3648989, at *6 (P.T.A.B. Aug. 24, 2022) (giving little to no weight to expert declaration that “offer[ed] only a *verbatim* restatement of the assertion being supported, without any supporting evidence or technical reasoning.”); *see also* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Additionally, Petitioner’s allegation is unsupported by Kokonaski-166 itself, which does not disclose the silicone seal as being placed between the electronics module and housing module. EX-1008, ¶[0087]. Indeed, such a seal would more likely be used to plug gaps or holes where water seepage was a concern and not used to encase all electrical components. EX-2014 ¶¶81-82. Kokonaski-166 describes the silicone merely a water-resistant seal for a system in which the battery may still be inductively charged by a charging coil. As taught by Kokonaski-166, this allows for the electronics module to be “hermetically sealed while still allowing the battery to be [inductively] recharged without breaking a moisture resistant seal.” *Id.*

Second, a POSITA would not have been motivated to incorporate Howell-158's teachings into those of Kokonaski-166. While Kokonaski-166 indicates that a frame may be "made of zyle, metal, or any combination thereof," a POSITA would have understood that to avoid the risk of short circuits, one would merely have to choose a non-metal frame or a frame not made entirely of metal. As demonstrated by the exchange between Patent Owner and the examiner during prosecution, the mere possibility of metal frames does not necessitate an insulating layer as claimed by the challenged patent. EX-1003, 66; EX-2014 ¶82. Indeed, as Petitioner has already noted, Kokonaski-166 teaches the importance of aesthetic design, and admits that using fewer or lighter materials, rather than more, would further that aesthetic design. Petition, 43 (citing EX-1008, ¶6); EX-2014 ¶82.

Furthermore, in merely cross-referencing its analysis under Ground 1, Petitioner fails to specifically address the proposed modification to Kokonaski-166 in particular and its negative impact to Kokonaski-166's goals. Petitioner once again does not specify how the double-sided sticky tape would be applied to Kokonaski-166's alleged electronics module. For example, were the double-sided sticky tape to be applied between the alleged module 101 and housing 104, the module could no longer be easily removed and "replaced without having to repurchase a complete pair of new electronic eyewear" or frames. EX-1008, [0098]; EX-2014 ¶¶82-83.

That is, Petitioner's proposed modification would nullify one of Kokonaski-166's key advantages. EX-2014 ¶83. As another example, Kokonaski-166 discloses a "manual touch switch 106" which sit atop the electronics module and extends up through the frame. EX-1008, [0074]; EX-2014 ¶84. Below the electronics module, Kokonaski-166 discloses a "lower module receptable cover 107," which may be removed to allow access to the battery or other electronic components. EX-1008, [0074]; EX-2014 ¶84. Were a POSITA to wrap the module 101 in double-sided sticky tape, the function of the switch would be impacted, the lower cover would no longer be removable, and the battery and other electronic components no longer accessible. EX-1008, [0074]; EX-2014 ¶84. A POSITA would not be motivated to make such a change where (a) it could have been avoided merely by selecting one of the other materials Kokonaski-166 discloses; and (b) such a change would nullify the operation and benefits Kokonaski-166 sought to achieve. EX-1008, [0074]; EX-2014 ¶84.

Petitioner's other arguments regarding a POSITA's motivation to implement Howell-158 merely cross-reference the arguments made under Ground 1. Petition, 57. For the same reasons discussed above in Section V(A)(1), a POSITA would not have been motivated to implement Howell-158's double-sided sticky tape within Kokonaski-166. Specifically, a POSITA would not have been needlessly opted for

all-metal frames (particularly when Kokonaski-166 explicitly teaches alternatives), realizing that doing so increased the risk of short circuits and leakage current, and then fixed any problem they created by adding an unnecessary insulating layer. *See* Section V(A)(1), *supra*.

2. Dependent Claims 2-9, 11, and 13-18

Claims 2-9, 11, and 13-18 are all dependent claims that, either directly or through intervening claims, depend from claim 1. Accordingly, for the same reasons set forth above regarding claim 1, claims 2-9, 11, and 13-18 are patentable over Kokonaski-166 in view of Howell-158.

F. Ground 6: Claims 1-9, 11, and 13-18 are Patentable Over Kokonaski-999 in View of Howell-158

1. Independent Claim 1

Petitioner's challenge under Ground 6 once again fails to disclose or render obvious the claimed "*insulating layer*" of independent claim 1.

Petitioner argues that, because Kokonaski-999 discloses a frame having one or more conductive portions—including conductive links embedded within the frame—it would have been obvious to a POSITA to implement Howell-158's alleged insulating layer between the electrical components and the frames. Petition, 69. In fact, the opposite is true, and Petitioner's assertions contradict the teachings of Kokonaski-999. EX-2014 ¶¶87-88.

Kokonaski-999 teaches an alternative to combining the eyeglasses disclosed therein with Howell-158's insulating layer, because Kokonaski-999 specifically uses the conductive portions of the frame to create conductive pathways that facilitate communication between electronic components. EX-1009, ¶¶[0035]-[0036], [0079], [0081]; EX-2014 ¶¶87-88. Other parts of the frames described by Kokonaski-999 can be non-conductive as desired, thereby rendering an "insulating layer" unnecessary. In fact, communication between electrical components as described by Kokonaski-999 would be impeded (if not destroyed) by placing an insulating layer between those components and the frame, in part due to the aesthetic concerns raised in Kokonaski-999, but also due to the fact that (1) Kokonaski-999 teaches that one or more electrical components rely on the conductivity of the frame for functionality; (2) Petitioner argues that a POSITA would have been motivated to place an insulating layer between those electrical components and the conductive frame upon which those components rely for functionality; and (3) that insulating layer would cleave the connection between the electrical components and the conductivity they would otherwise draw from the frame, rendering a core feature of Kokonaski-999's frame useless. EX-1009, ¶¶[0035]-[0036], [0079], [0081]; EX-2014 ¶¶87-88.

Furthermore, to the extent that interference or short circuiting were still a concern, a POSITA would understand that other portions of the frame can be non-

conductive to the extent necessary to prevent short circuiting and leakage current without adding the potentially cumbersome insulating layer, and Kokonaski-999 describes such a scenario as being particularly beneficial to its stated goal of aesthetics and minimal design (especially given that the eyeglasses of Kokonaski-999 need to be comfortably placed on a person's head). EX-2014 ¶¶87-88; EX-2019; EX-2020. The non-conductive portions of the frame would not meet the "insulating layer" limitation, as explained during prosecution. EX-1003, 65.

Specifically, as Petitioner notes, "Kokonaski-999 discloses frame 102 having 'one or more conductive portions.'" Petition, 69 (citing EX-1009, ¶32). Petitioner ignores the remaining portions of the passage, which provides that "the first and second electronic modules can communicate using one or more conductive wires" or "one or more conductive portions of the frame." EX-1009, ¶32; EX-2014 ¶89. Accordingly, not only would a POSITA not have been motivated to incorporate an insulating layer from Howell-158 into Kokonaski-999, but the POSITA would have actually been motivated against doing so, because the "conductive links embedded within any portion of the frame" are used in Kokonaski-999 to facilitate interaction between electrical components, and incorporating an insulating layer as Petitioner suggests would have eliminated such functionality. EX-2014 ¶89. Petitioner's allegation that a POSITA would have somehow been motivated by Kokonaski-999's

teachings to do the exact opposite of what Kokonaski-999 teaches is unsupported. *Xerox Corp. v. Bytemark, Inc.*, No. IPR2022-00624, 2022 WL 3648989, at *6 (P.T.A.B. Aug. 24, 2022) (giving little to no weight to expert declaration that “offer[ed] only a *verbatim* restatement of the assertion being supported, without any supporting evidence or technical reasoning.”); *see also* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Petitioner's other arguments regarding a POSITA's motivation to implement Howell-158 merely cross-reference the arguments made under Ground 1. Petition, 69. For the same reasons discussed above in Section V(A)(1), a POSITA would not have been motivated to implement Howell-158's double-sided sticky tape within Kokonaski-999. *See* Section V(A)(1), *supra*.

Accordingly, Petitioner has failed to show that the cited combination of Kokonaski-999 and Howell-158 renders obvious all limitations of the challenged claim.

2. Dependent Claims 2-9, 11, and 13-18

Claims 2-9, 11, and 13-18 are all dependent claims that, either directly or through intervening claims, depend from claim 1. Accordingly, for the same reasons

set forth above regarding claim 1, claims 2-9, 11, and 13-18 are patentable over Kokonaski-999 in view of Howell-158.

VI. Conclusion

For the foregoing reasons, Patent Owner respectfully requests that the Board find challenged claims 1-18 patentable.

Date: March 31, 2025

Respectfully submitted,

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CERTIFICATION OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER'S RESPONSE** specified in 37 C.F.R. § 42.24 have 8,988 words, in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word 365 v.2022.

Date: March 31, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **PATENT OWNER'S RESPONSE** and all supporting **EXHIBITS 2014 – 2020** were served by filing the documents through the Patent Trial and Appeal Case Tracking System (P-TACTS) on March 31, 2025 and courtesy copies were also served via electronic mail, in their entireties on the following:

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