

On behalf of **Masimo Corporation**

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UNITED STATES PATENT AND TRADEMARK OFFICE

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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MASIMO CORPORATION  
Petitioner,

v.

APPLE INC.  
Patent Owner.

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Case No. IPR2023-00635  
U.S. Patent No. 10,987,054

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**PETITIONER'S REQUEST FOR REHEARING**

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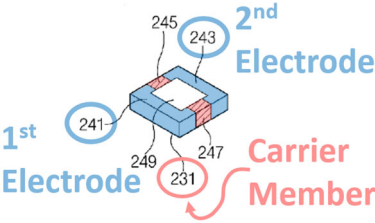
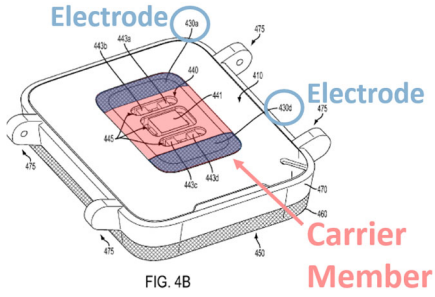
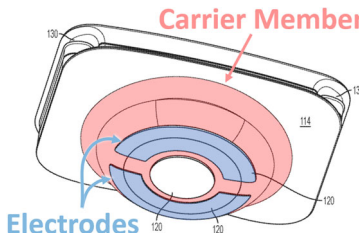
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Masimo Corporation (“Petitioner”) requests rehearing of the Decision Denying Institution of *Inter Partes* Review (Paper 11, or “the Decision”) of claims 1–20 of U.S. Patent No. 10,987,054 (“the ’054 patent”).

## I. INTRODUCTION

The Decision applied the strict anticipation standard for its Ground 1 analysis under 35 U.S.C. § 102, finding that Rothkopf does not expressly teach electrodes “positioned on a carrier member.” Decision at 17–24. However, the Decision imported this same strict § 102 standard into its treatment of the nine subsequent § 103-based grounds (Grounds 1A–3C). In doing so, the Decision overlooked the separate obviousness standard, and it misapprehended Petitioner’s arguments and evidence that multiple secondary references teach electrodes positioned on a carrier member as shown below:

| Jung                                                                                | Lapetina                                                                             | Paulke                                                                                |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| See Pet. at 6, 15, 43–45, 55–56, 61, 64.                                            | See <i>id.</i> at 18, 36.                                                            | See <i>id.</i> at 7, 16, 77, 80, 84, 85.                                              |

Reconsideration of its Decision will allow the Board to address this oversight.

## II. LEGAL STANDARDS

Petitioner requests rehearing under 37 C.F.R. § 42.71(d). This rule requires Petitioner to “specifically identify the matters it believes the Board misapprehended or overlooked, and the place where each matter was previously addressed” in the Petition. 37 C.F.R. § 42.71(d). There are two such matters, and they are related.

First, the Decision did not properly apply the obviousness standard. The underlying legal standards relevant to the Petition are set forth in 35 U.S.C. §§ 102 and 103. The Decision acknowledged that the § 102 and § 103 standards are different, citing under “Principles of Law” both anticipation cases and obviousness cases—including, for obviousness, *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) and *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Decision at 11–12. However, the Decision failed to correctly analyze the first two Graham factors. For the first factor, it ignored that Jung, Lapetina, and Paulke are within the “scope and content of the prior art,” in view of Petitioner’s specific citations to those references. *See infra* § III(B); Pet. at 55–57, 36–37, 76–78.

Second, the Decision also ignored that Jung, Lapetina, and Paulke teach electrodes “positioned on a carrier member” (*id.*), so this feature is not actually a “difference[] between the claimed subject matter and the prior art” under the second *Graham* factor. *Id.* These problems were central to the Decision’s

outcome because at least one of Jung, Lapetina, and Paulke is included in each of the Petition’s nine alternative grounds.<sup>1</sup> Thus, the Decision made a material error because Jung, Lapetina, and Paulke teach the allegedly missing element of electrodes on a carrier member. *Id.*

Consistent with 37 C.F.R. § 42.71(d), the argument below provides further specifics regarding matters the Decision misapprehended or overlooked, and additional citations to where in the Petition these matters were addressed.

### **III. ARGUMENT**

#### **A. The Decision Expressly Relied on Anticipation Conclusions as Dispositive In Its Obviousness Analyses**

The obviousness standard is less strict than the anticipation standard. Accordingly, it is possible to find invalidity under § 103, but not under § 102, even using the same reference. *CRFD Research v. Matal* [2016-2198] (Dec. 5, 2017), p. 28 (“Even if a reference’s teachings are insufficient to find anticipation, that same reference’s teachings may be used to find obviousness.”). Therefore, it is not sufficient to cite a conclusion under the stricter 102 standard as dispositive support for a conclusion under the different 103 standard. The *CRFD Research* decision explained it this way: “Whatever the merits of the Board’s [anticipation

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<sup>1</sup> Jung is included in Grounds 2, 2A, 2B, 2C; Lapetina is included in Grounds 1A, 2C, and 3C; and Paulke is included in Grounds 3, 3A, 3B, and 3C.

determination], its findings on anticipation are insufficient as a matter of law to decide the obviousness inquiry.” *Id.* This holding of *CRFD Research* is logical because secondary references are available under 35 U.S.C. § 103, but not under § 102.

In contrast to these principles explained in *CRFD Research*, the Decision relied on 102-based analysis in deciding 103-based grounds. Although Ground 1 was the only ground that made anticipation arguments, the Decision’s analysis of all subsequent grounds (1A–3C) referred to the Ground 1 analysis as dispositive:

| Grounds    | Excerpts from the Decision                                                                                                                                                      |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1A         | “Accordingly, <i>for the same reasons discussed above in connection with claim 9</i> , we determine Petitioner has not met its burden . . . .” Decision at 25 (emphasis added). |
| 2          | “ <i>For the reasons discussed above in the context of Ground 1</i> , we determine that Petitioner has not adequately demonstrated . . . .” <i>Id.</i> (emphasis added).        |
| 2A, 2B, 2C | “Accordingly, <i>for the same reasons discussed above</i> , we determine Petitioner has not met its burden . . . .” <i>Id.</i> at 27 (emphasis added).                          |
| 3          | “. . . does not articulate an obviousness ground that cures <i>the underlying defect of the anticipation challenge of Ground 1</i> .” <i>Id.</i> at 28 (emphasis added).        |
| 3A, 3B, 3C | “for <i>the same reasons discussed above</i> , we determine Petitioner has not met its burden” <i>Id.</i> (emphasis added).                                                     |

In addressing Ground 2, for example, in addition to the citation above, the Decision incorrectly stated that the Petition’s claim 9 and 15 contentions “rely on” its Ground 1 contention “that Rothkopf discloses an electrode positioned on the rear cover (carrier member).” Decision at 26 (citing Pet. 55–58, 63–65). To the contrary, the Petition’s grounds are all *independent, alternative* arguments, as summarized in the listing of grounds:

**GROUND LISTING**

|                 |                                                                                        |
|-----------------|----------------------------------------------------------------------------------------|
| <b>GROUND 1</b> | Claims 9 and 13-15 are unpatentable as anticipated by Rothkopf                         |
| * * *           |                                                                                        |
| <b>GROUND 2</b> | Claims 1-6, 9, 12-16, 17, 19 are unpatentable as obvious over Rothkopf in view of Jung |
| * * *           |                                                                                        |
| <b>GROUND 3</b> | Claims 1-5, 9, 13-16, 19 are unpatentable as obvious over Rothkopf in view of Paulke   |

Petition at Grounds Listing, Page 1 (emphasis added). While Masimo’s alternative grounds (including Ground 2) maintain the factual contention that Rothkopf teaches electrodes on a carrier assembly, they rely on further evidence showing that secondary references *also* disclose these limitations. *See infra* § III(B); Pet. at 15, 55–57, 36–37, 76–78. For example, the Petition stated “Jung teaches a POSITA how to incorporate electrodes on a carrier structure” (Pet. at 57) and “Paulke teaches a POSITA how to incorporate electrodes on a carrier structure” (Pet. at 78).

Upon rejecting Petitioner’s Rothkopf contention in Ground 2, the Decision should have then turned to Petitioner’s Jung contention (detailed further below). Rather than performing this review, the Decision stated the Petition “d[id] not overcome *the deficiencies discussed above* with respect to the independent claims.” Decision at 26 (emphasis added). But such alleged deficiencies “discussed above” related to anticipation, so the Ground 2 discussion failed to address the different, 35 U.S.C. § 103 standard<sup>2</sup> or Jung, a secondary reference. The Ground 3 discussion was similarly flawed, failing to consider Paulke.

**B. The Petition Showed That Secondary References Teach Electrodes Positioned on Carrier Members**

By re-using its 102-based Rothkopf analysis to deny the Petition’s 103-based grounds, the Decision overlooked that, under 35 U.S.C. § 103, secondary references fill any perceived gaps. As the Petition explains: “A POSITA seeking to implement the teaching of Rothkopf to locate the electrodes on the biosensor module would look to *other mobile electronic device references that teach the use of electrodes on a biosensor carrier assembly* similar to that of Rothkopf.” Pet. at

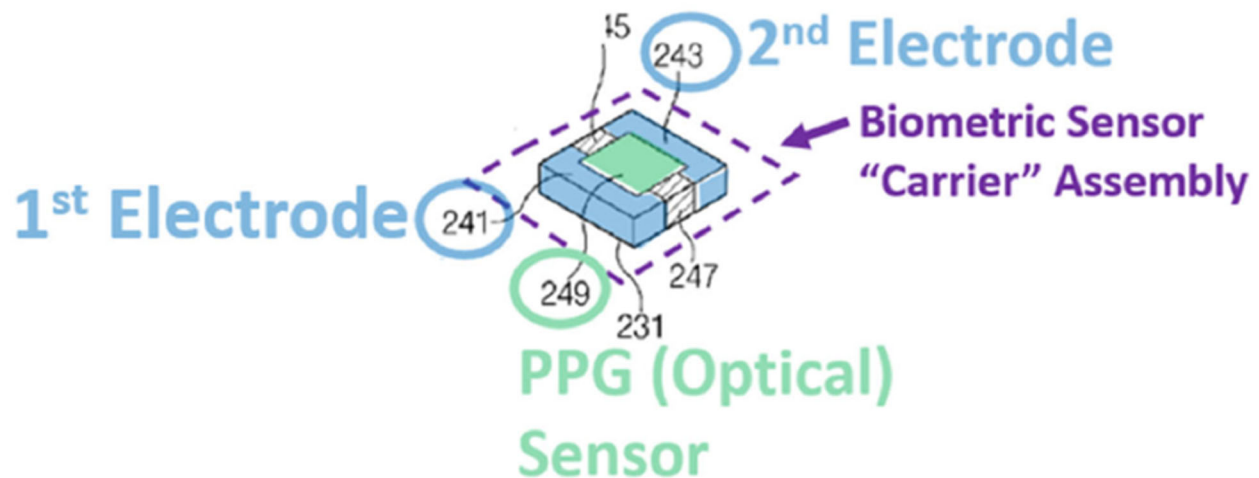
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<sup>2</sup> For example, the Decision criticized the Petition because it “stitch[e]d together” embodiments (Decision at 23). This criticism does not apply to the obviousness standard, which contemplates combining not just embodiments from a common disclosure, but combining entire references.

55–56 (emphasis added). In other words, the cited secondary references have biosensor carrier assemblies similar to Rothkopf’s biosensor carrier assembly, and this similarity provides a motivation to combine. Further, as shown below, the biosensors on these carrier assemblies include electrodes.

### 1. Jung Teaches Electrodes on a Carrier

Jung discloses first (241) and second (243) electrodes “positioned on” the carrier member (231). Pet. at 56. The Petition provided the following annotated figure showing this structure and teaching:



*Id.* at 15, 56. The Petition further stated:

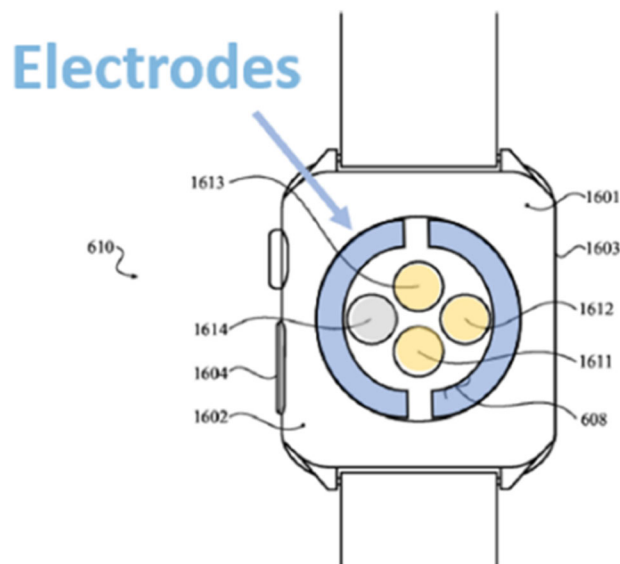
Jung discloses a mobile device with *a carrier member*, which Jung refers to as a biometric sensor (231). Biometric sensor (231) *includes: first and second electrodes* (241, 243, respectively).

*Id.* at 15 (emphasis added).

The Petition, and Petitioner’s expert Mr. Oslan, both explained why a person of ordinary skill in the art would have been motivated to “use the teachings of Jung to implement the carrier assembly taught by Rothkopf.” Pet. at 57; Ex. 1003 ¶ 110.

A [POSITA] would *position the electrodes and wrap the electrodes around the edges of Rothkopf’s carrier member as taught by Jung* in order to improve contact with the patient’s skin by covering as much of the carrier member as possible without obstructing the optical sensor. A POSITA would understand that it is advantageous to “increase the contact area of the skin-to-electrode interface to maintain lower impedance and exhibit better behavior in reducing motion artifacts.” EX1003 ¶ 110.

A POSITA would end up with a sensor arrangement shown below using the teachings of Jung in the system of Rothkopf:



EX1003 ¶ 110.

Pet. at 57 (emphasis added). The Petition and Mr. Oslan further explained that “Jung’s carrier structure is similar in size and purpose to the carrier structure of

Rothkopf and *Jung teaches a POSITA how to incorporate electrodes on a carrier structure.*” Pet. at 57, EX1003 ¶ 110 (emphasis added).

By citing exclusively to a previous 102-based analysis in addressing Petitioner’s 103-based Ground 1A,<sup>3</sup> the Decision overlooked the above passages from the Petition that point to teachings of Jung combined with Rothkopf. Reconsideration will allow the board to address this oversight.

## 2. Lapetina Teaches Electrodes on a Carrier

Lapetina discloses electrodes on a carrier:

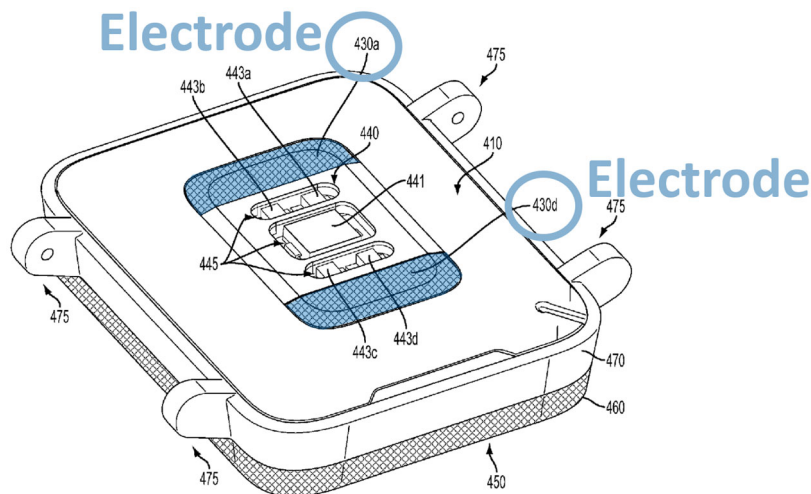


FIG. 4B

Pet. at 36–37; EX1003 ¶¶ 75–76. The Petition discussed Lapetina with respect to claim 10, which depends from claim 9. Thus, the Petition had previously

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<sup>3</sup> “Accordingly, for *the same reasons* discussed above in connection with claim 9, we determine Petitioner has not met its burden.” Decision at 25 (emphasis added).

established how Rothkopf and Jung taught electrodes on a carrier.<sup>4</sup> Lapetina adds to this by teaching grounding using a well-known three lead ECG system. Moreover, consistent with the other obviousness references in the Petition, Lapetina’s figure shows electrodes 430a and 430d, both shaded and labeled in the illustration above, positioned on a central, slightly protruding carrier member.

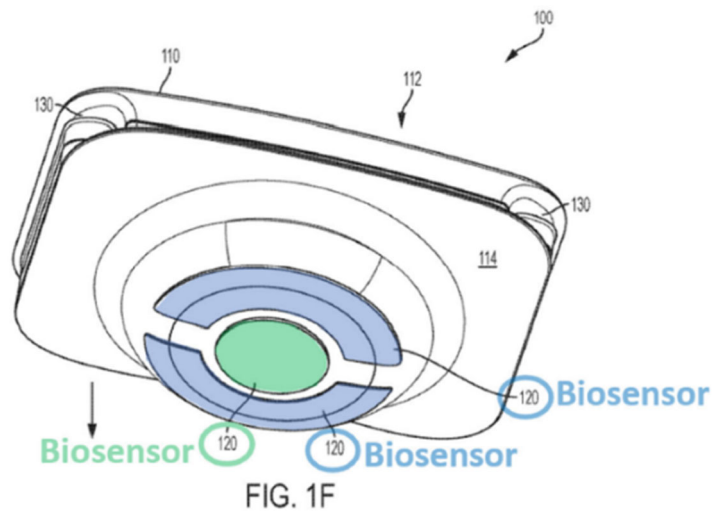
### **3. Paulke Teaches Electrodes on a Carrier**

In Ground 3, the Petition showed how the Paulke reference also teaches biosensor electrodes on a carrier:

*Paulke discloses a biosensor module carrier.* Paulke states that any “suitable number and/or type(s) of biosensors may be *included in the biosensor module*, such as but not limited to ... *electrocardiography*, ... etc.” and the wearable device may include a processor that may process physiological measurements (such as ECG). EX1007, 12:6-13, 6:11-13. .... *Paulke suggests, for example, the two biosensors 120 (annotated in blue) may be first and second electrodes (such as for galvanic or ECG measurements) and biosensor 120 (annotated in green) may be for optical reflectance of blood vessels or oxygen saturation (PPG).* EX1007, 14:26-15:18; EX1003, ¶ 157.

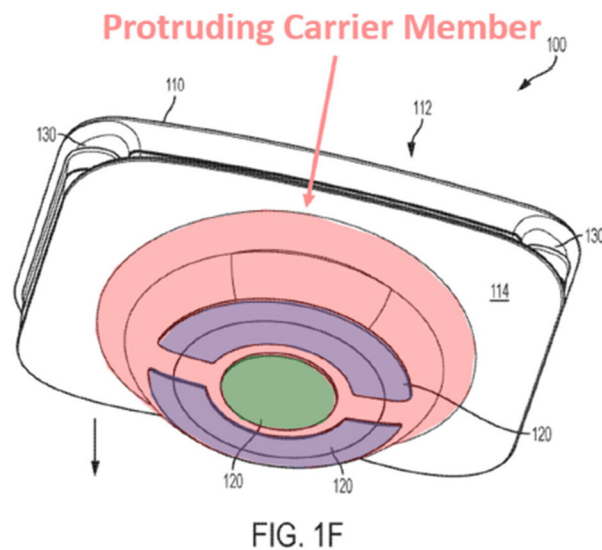
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<sup>4</sup> Petitioner recognizes that the Decision does not agree that Rothkopf alone teaches electrodes on a carrier. However, the Decision overlooked the evidence from Jung teaching electrodes on a carrier, which the Petition also provided prior to discussions of Lapetina. Pet. at 56.



Pet. at 76–77 (emphasis added).

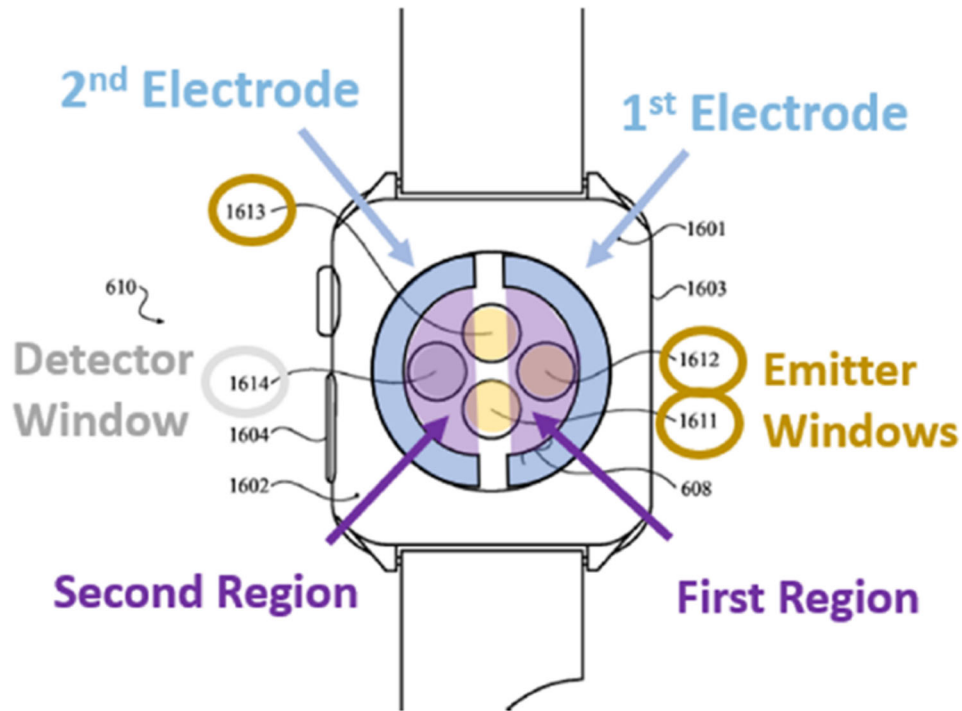
Paulke's protruding carrier member is further illustrated and emphasized in the following annotated figure in the Petition:



Pet. at 84.

The Petition and Mr. Oslan both explained why a person of ordinary skill in the art would have been motivated to use the teachings of Paulke to put electrodes on a carrier member:

A POSITA would position the *electrodes as taught by Paulke* in order to maintain contact with the user's skin. EX1007, 6:5-7. A POSITA would end up with a sensor arrangement shown below using the teachings of [Paulke] in the system of Rothkopf:

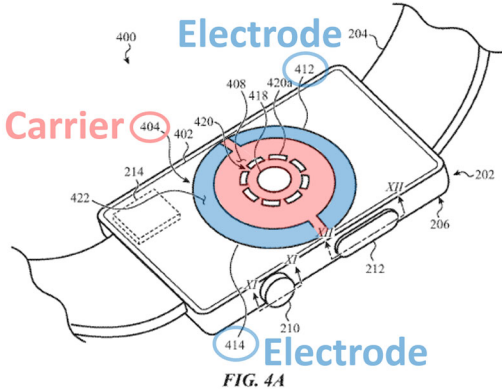
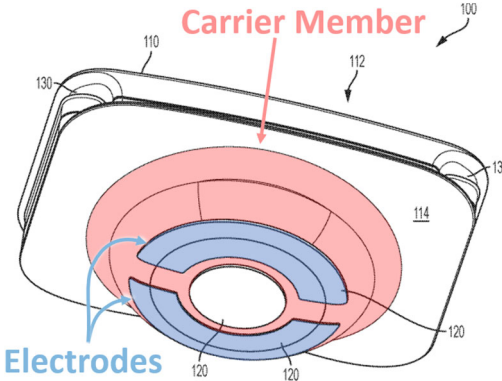


Pet. at 77–78; Ex. 1003 ¶ 160 (emphasis added, typo corrected).

The Petition and Mr. Oslan explained that “Paulke’s carrier structure is similar in size and purpose to the carrier structure of Rothkopf,” and “Paulke teaches a POSITA how to *incorporate electrodes on a carrier structure*.” *Id.*

Further, the Paulke reference is highly similar to the ’054 Patent in its physical shape and construction. Pet. at 77–78; Ex. 1003 ¶ 160. As shown in the comparison below, each of the ’054 patent and Paulke have a circular carrier member protruding from an external surface of a rectangular housing, and each

carrier has two biosensors (which can be electrodes) that form arcs partially surrounding a central biosensor (which can be optical):

| '054 Patent                                                                                      | Paulke                                                                             |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  <p>FIG. 4A</p> |  |
| See Pet. at 4.                                                                                   | See <i>id.</i> at 80, 84.                                                          |

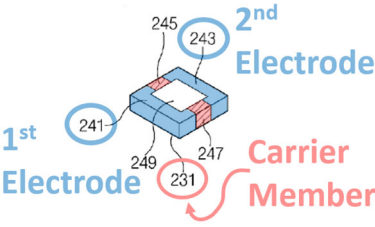
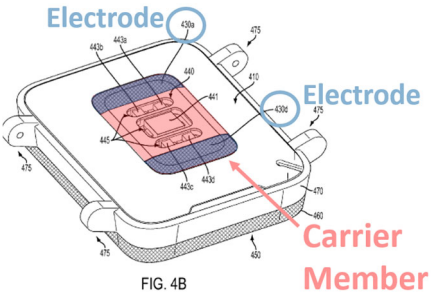
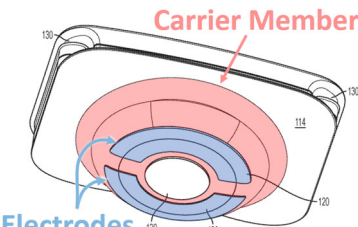
The Paulke evidence was provided for grounds based on 35 U.S.C. § 103 (*see* Pet. at 77, 80, 84, 85), but it was overlooked and not addressed in the Decision.

By citing exclusively to a previous 102-based analysis in addressing Petitioner’s 103-based Ground 3,<sup>5</sup> the Decision overlooked the above teachings of Paulke in combination with Rothkopf. Reconsideration will allow the Board to address this oversight.

<sup>5</sup> “. . . d[oes] not articulate an obviousness ground that cures *the underlying defect of the anticipation challenge of Ground 1.*” Decision at 28 (emphasis added).

#### IV. CONCLUSION

The Petition cited to multiple references teaching electrodes on a carrier. The Decision disagreed that Rothkopf alone taught this in the context of 35 U.S.C. § 102. However, the Decision failed to recognize that the Petition *also* presented Rothkopf as modified by *secondary references* for these limitations in the context of 35 U.S.C. § 103. The Decision thus overlooked the other evidence on this subject—from the Jung, Lapetina, and Paulke references:

| Jung                                                                               | Lapetina                                                                            | Paulke                                                                               |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |
| <p>See Pet. at 6, 15, 43–45, 55–56, 61, 64.</p>                                    | <p>See <i>id.</i> at 18, 36.</p>                                                    | <p>See <i>id.</i> at 7, 16, 77, 80, 84, 85.</p>                                      |

Petitioner believes that when the proper standard is applied to this overlooked evidence, the Board will find that the Petition demonstrates a reasonable likelihood of establishing unpatentability of at least one independent claim of the '054 patent under at least one of the Petition's nine 103-based grounds. For these reasons, Petitioner requests reconsideration and an order instituting *inter partes* review of the '054 patent.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: October 18, 2023

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing  
**PETITIONER’S REQUEST FOR REHEARING** is being served on October  
18, 2023, via Federal Express overnight delivery on counsel of record for U.S.  
Patent No. 10,987,054 as addressed below:

|                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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Dated: October 18, 2023

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