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**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

**Before the Honorable Doris Johnson Hines
Administrative Law Judge**

In the Matter of

**CERTAIN SMART WEARABLE
DEVICES, SYSTEMS, AND
COMPONENTS THEREOF**

Investigation No. 337-TA-1398

**PRE-HEARING BRIEF
OF THE COMMISSION INVESTIGATIVE STAFF**

Margaret D. Macdonald, Director
David O. Lloyd, Supervisory Attorney
R. Whitney Winston, Investigative Attorney
OFFICE OF UNFAIR IMPORT INVESTIGATIONS
U.S. International Trade Commission
500 E Street SW, Suite 401
Washington, DC 20436
(202) 205-2221

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TABLE OF CONTENTS

I. INTRODUCTION.....	1
A. PROCEDURAL HISTORY.....	1
B. THE PARTIES	4
1. Complainants	4
2. Respondents	4
C. THE PATENT AT ISSUE – U.S. PATENT NO. 11,868,178.....	5
D. THE PRODUCTS AT ISSUE	8
1. The Accused Products.....	8
2. The Domestic Industry Products.....	8
E. APPLICABLE LEGAL STANDARDS	8
1. Claim Construction	8
2. Infringement.....	10
3. Domestic Industry (Technical Prong).....	12
4. Invalidity	13
II. STATUTORY AUTHORITY	14
III. OWNERSHIP.....	15
IV. IMPORTATION.....	15
V. U.S. PATENT NO. 11,868,178	16
A. CLAIM CONSTRUCTION.....	16
1. Level of Ordinary Skill in the Art.....	16
2. Order No. 17: Construing Claim Terms	16
3. Agreed Upon Terms.....	17
B. INFRINGEMENT	17
1. Claim 1.....	18

PUBLIC

2. Claim 2.....	32
3. Claim 12.....	33
4. Claims 13 and 14	35
5. Claims 17 and 18	35
6. Conclusion	37
C. TECHNICAL PRONG	37
1. Claim 1.....	38
2. Claim 2.....	45
3. Claim 12.....	46
4. Claims 13 and 14	47
5. Claims 17 and 18	47
6. Conclusion	49
D. VALIDITY	49
1. Issue Preclusion	50
2. Anticipation.....	54
3. Obviousness	55
VI. DOMESTIC INDUSTRY – ECONOMIC PRONG	79
A. LEGAL STANDARD	79
B. DISCUSSION.....	81
1. Plant and Equipment.....	81
2. Labor and Capital.....	82
3. Quantitative and Qualitative Significance	83
4. Conclusion	86
VII. REMEDY AND BONDING	86
A. REMEDIAL ORDERS.....	86

PUBLIC

1. Limited Exclusion Order.....	86
2. Cease and Desist Order.....	86
3. Limitations and Exclusions.....	88
B. BOND.....	90
VIII. PUBLIC INTEREST.....	93
IX. CONCLUSION	96

TABLE OF AUTHORITIES

CASES

<i>Abraxis Bioscience, Inc. v. Mayne Pharma (USA) Corp.</i> , 467 F.3d 1370 (Fed. Cir. 2006)	11
<i>ACTV, Inc. v. The Walt Disney Co.</i> , 346 F.3d 1082 (Fed. Cir. 2003)	9
<i>Alloc, Inc. v. U.S. International Trade Commission</i> , 342 F.3d 1361 (Fed. Cir. 2003)	9, 13
<i>Amgen, Inc. v. F. Hoffman-La Roche Ltd.</i> , 580 F.3d 1340 (Fed. Cir. 2009)	11
<i>Applied Med. Res. Corp. v. U.S. Surgical Corp.</i> , 448 F.3d 1324 (Fed. Cir. 2006)	11
<i>Bally/Midway Mfg. Co., v. U.S. Int’l Trade Comm’n</i> , 714 F.2d 1117 (Fed. Cir. 1983)	80
<i>Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.</i> , 296 F.3d 1106 (Fed. Cir. 2002)	9
<i>Certain Air Mattress Systems, Components Thereof, and Methods of Using the Same</i> , Inv. No. 337-TA-971, Comm’n Op. (Jun. 20, 2017)	87
<i>Certain Ammonium Octamolybdate Isomers</i> , Inv. No. 337-TA-477, Comm’n Op. (Jan. 2004)	12
<i>Certain Coaxial Connectors and Components Thereof and Products Containing Same</i> , Inv. No. 337-TA- 650, Comm’n Op. (April 14, 2010)	81
<i>Certain Compact Wallets and Components Thereof</i> , Inv. No. 337-TA-1355, Comm’n Op.(Aug. 13, 2024).....	14
<i>Certain Digital Set-Top Boxes and Components Thereof</i> , Inv. No. 337-TA-712, Comm’n Op. (Sept. 23, 2011)	51, 53
<i>Certain Fitness Devices, Streaming Components Thereof, and Systems Containing Same</i> , Inv. No. 337-TA-1265, Comm’n Op. (Mar. 23, 2023).....	88, 90
<i>Certain Hardware Logic Emulation Systems and Components Thereof</i> , Inv. No. 337-TA-383, Comm’n Op. (Mar. 1998).....	11

PUBLIC

<i>Certain Ink Cartridges and Components Thereof,</i> Inv. No. 337-TA-565, Comm’n Op. (Nov. 2007).....	90
<i>Certain Integrated Circuit Chipsets and Products Containing Same,</i> Inv. No. 337-TA-428, Initial Determination (May 4, 2000),.....	79, 80
<i>Certain Liquid Crystal Display Devices,</i> Inv. No. 337-TA-631, Comm’n Op. (July 10, 2009).....	91
<i>Certain Lithium Ion Batteries, Battery Cells, Battery Modules, Battery Packs, Components Thereof, & Processes Therefor,</i> Inv. No. 337-TA-1159, Comm’n Op. (Mar. 4, 2021).....	89
<i>Certain Methods of Making Carbonated Candy Products,</i> Inv. No. 337-TA-292, Comm’n Op. (Jun. 1991).....	12
<i>Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Products Containing Same,</i> Inv. No. 337-TA-372, Comm’n Op. (May 1996)	91
<i>Certain Plastic Encapsulated Integrated Circuits,</i> Inv. No. 337-TA-315, Comm’n Op. (Nov. 1992).....	91
<i>Certain Three-Dimensional Cinema Systems and Components Thereof,</i> Inv. No. 337-TA-939, Comm’n Op. (Jul. 21, 2016).....	53
<i>Certain Tobacco Heating Articles and Components Thereof,</i> Inv. No. 337-TA-1199, Comm’n Op. (Oct. 19, 2021).....	89
<i>Certain Variable Speed Wind Turbines and Components Thereof,</i> Inv. No. 337-TA-376, Comm’n Op. (Nov. 1996).....	79, 80
<i>Certain Video Game Systems,</i> Inv. No. 337-TA-743, Comm’n Op. (Jan. 20, 2012)	80
<i>Checkpoint Sys., Inc. v. United States Int’l Trade Comm’n,</i> 54 F.3d 756 (Fed. Cir. 1995)	50
<i>Chimie v. PPG Indus., Inc.,</i> 402 F.3d 1371 (Fed. Cir. 2005)	10
<i>ClearCorrect Operating, LLC v. Int’l Trade Comm’n,</i> 810 F.3d 1283 (Fed. Cir. 2015)	88
<i>Commil USA, LLC v. Cisco Systems, Inc.,</i> 135 S.Ct. 1920 (2015).....	12
<i>Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.,</i> 424 F.3d 1293 (Fed. Cir. 2005)	11

PUBLIC

<i>Demaco Corp. v. F. Von Langsdorff Licensing Ltd.</i> , 851 F.2d 1387 (Fed. Cir. 1988)	77, 78
<i>Finisar Corp. v. The DirecTV Group, Inc.</i> , 523 F.3d 1323 (Fed. Cir. 2008)	13, 54
<i>Fox Factory, Inc. v. SRAM, LLC</i> , 944 F.3d 1366 (Fed. Cir. 2019)	78
<i>Glaxo Group Ltd. v. Apotex, Inc.</i> , 376 F.3d 1339 (Fed.Cir. 2004)	58, 62, 66
<i>Global-Tech Appliances, Inc. v. SEB S.A.</i> , 131 S.Ct. 2060 (2011).....	12
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	14, 56
<i>Graver Tank & Mfg. Co. v. Linde Air Prods. Co.</i> , 339 U.S. 605 (1950).....	11
<i>Hearing Components, Inc. v. Shure Inc.</i> , 600 F.3d 1357 (Fed. Cir. 2010)	10, 11
<i>Henny Penny Corp. v. Frymaster LLC</i> , 938 F.3d 1324 (Fed. Cir. 2019)	76
<i>In re Von Clem</i> , 229 F.2d 441 (CCPA 1955)	80
<i>Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.</i> , 381 F.3d 1111 (Fed. Cir. 2004)	9
<i>Intel Corp. v. U.S. International Trade Commission</i> , 946 F.2d 821 (Fed. Cir. 1991)	10
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	14, 56
<i>Markman v. Westview Instruments Inc.</i> , 52 F.3d 969 (Fed. Cir. 1995) (en banc)	8, 9
<i>Medichem, S.A. v. Rolabo, S.L.</i> , 353 F.3d 928 (Fed. Cir. 2003)	13, 54
<i>National Fruit Products Co. v. C.H. Musselman Co.</i> , 8 F.Supp. 994 (M.D. Pa. 1934).....	52

PUBLIC

<i>Ohio Willow Wood Co. v. Alps S., LLC</i> , 735 F.3d 1333 (Fed. Cir. 2013)	51, 53
<i>Perricone v. Medicis Pharm. Corp.</i> , 432 F.3d 1368 (Fed. Cir. 2005)	13, 54
<i>Pharmastem Therapeutics, Inc. v. Viacell, Inc.</i> , 491 F.3d 1342 (Fed. Cir. 2007)	14, 56
<i>Phillips v. A.W.H. Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (en banc)	9, 10
<i>Raytheon Techs. Corp. v. General Electric Co.</i> , 993 F.3d 1374 (Fed. Cir. 2021)	52
<i>Sanofi-Aventis U.S., LLC v. Dr. Reddy's Laboratories, Inc.</i> , 933 F.3d 1367 (Fed. Cir. 2019)	52
<i>Sanofi-Synthelabo v. Apotex, Inc.</i> , 470 F.3d 1368 (Fed. Cir. 2006)	58, 62, 66
<i>Scanner Technologies Corp. v. ICOS Vision Sys. Corp.</i> , 528 F.3d 1365 (Fed. Cir. 2008)	14, 56
<i>SiRF Tech., Inc. v. Int'l Trade Comm'n</i> , 601 F.3d 1319 (Fed. Cir. 2010)	15
<i>Suprema, Inc. v. Int'l Trade Comm'n</i> , 796 F.3d 1338 (Fed. Cir. 2015)	12
<i>Teva Pharm. USA, Inc. v. Sandoz, Inc.</i> , 135 S. Ct. 831 (2015)	8
<i>Therasense, Inc. v. Becton, Dickinson and Company</i> , 649 F.3d 1276 (Fed. Cir. 2011) (en banc)	13, 54
<i>TQ Delta, LLC v. Cisco Sys., Inc.</i> , 942 F.3d 1352 (Fed. Cir. 2019)	75, 76
<i>Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.</i> , 204 F.3d 1360 (Fed. Cir. 2000)	11
<i>United Access Techs., LLC v. Centurytel Broadband Servs. LLC</i> , 778 F.3d 1327 (Fed. Cir. 2015)	50
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576 (Fed. Cir. 1996)	9, 10

PUBLIC

<i>WMS Gaming, Inc. v. Int'l Game Tech.</i> , 184 F.3d 1339 (Fed. Cir. 1999)	76
<i>Young Engineers, Inc. v. U.S. International Trade Commission</i> , 721 F.2d 1305 (Fed. Cir. 1983)	50

STATUTES

19 C.F.R. § 210.42	86
19 C.F.R. § 210.50	90
35 U.S.C. § 102	13, 54
35 U.S.C. § 103	14, 56, 79
35 U.S.C. § 271	11
35 U.S.C. § 282	49
37 C.F.R. § 42.107(e)	52
37 C.F.R. § 42.207(e)	52

TABLE OF ABBREVIATIONS

CDX	Complainant's demonstrative exhibit
CPB	Complainant's pre-hearing brief
CPX	Complainant's physical exhibit
CX	Complainant's exhibit
Dep.	Deposition
JX	Joint exhibit
RDX	Respondents' demonstrative exhibit
RPB	Respondents' pre-hearing brief
RX	Respondents' exhibit
SMB	Staff's claim construction brief
Tr.	Transcript

I. INTRODUCTION

The Commission Investigative Staff (“Staff”) respectfully submits this pre-hearing brief pursuant to the procedural schedule and Ground Rule 11.2. *See* Order No. 2, G.R. 11.2 (Apr. 17, 2024). The evidentiary hearing will determine whether there has been a violation of Section 337 based on infringement of U.S. Patent No. 11,868,178 (“the ’178 patent” or “Asserted Patent”). For the reasons set forth below, the Staff expects the evidence to show that there has been a violation of Section 337.

In brief, the Staff expects the evidence to show that Respondents infringe the asserted claims of the ’178 patent, that Oura satisfies the technical prong of the domestic industry requirement as to the ’178 patent, and Oura satisfies the economic prong of the domestic industry requirement. The Staff also expects that Respondents will be unable to show by clear and convincing evidence that any of the asserted claims are invalid.

In the event that a violation of Section 337 is found, the Staff believes that the appropriate remedy will be a limited exclusion order and cease and desist orders.

A. Procedural History

On March 13, 2024, Complainants Ouraring, Inc. and Õura Health Oy (collectively, “Oura”) filed a complaint with the Commission pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337. Oura amended the Complaint on March 21, and 22, 2024. The Complaint, as amended, alleged a violation of Section 337 based on infringement of certain claims of the ’178 patent, as well as certain claims of U.S. Patent No. 11,868,179 (“the ’179 patent”) and U.S. Patent No. 10,842,429 (“the ’429 patent”). *See* 89 Fed. Reg. 27452-53 (Apr. 17, 2024) (“Notice of Institution of Investigation”).

PUBLIC

On April 17, 2024, the Commission instituted an investigation by publication of a notice in the *Federal Register* to determine:

whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain products identified in paragraph (2) by reason of infringement of one or more of claims 1, 2, 6-10, 12-14, 17, and 18 of the '178 patent; claims 1, 3-5, 9, 10, and 13-16 of the '179 patent; and claims 1, 3-6, and 8-11 of the '429 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

89 Fed. Reg. 27452 (Apr. 17, 2024).

On April 26, 2024, Oura filed a motion for leave to file an amended complaint to correct the address of Respondent RingConn LLC and the name and address of its corporate parent. *See* Mot. Docket No. 1398-004. The motion was granted by the ALJ on May 3, 2024, and on June 7, 2024, the Commission corrected RingConn LLC's address and changed the name of Respondent Guangdong Jiu Zhi Technology Co., Ltd., to Shenzhen Ninenovo Technology Limited. *See* Order No. 8: Initial Determination Granting Complainants' Motion to Amend the Complaint and Notice of Investigation (May 3, 2024); 89 Fed. Reg. 48686-87 (Jun. 7, 2024).

On May 16, 2024, Respondents RingConn LLC and Shenzhen Ninenovo Technology Ltd. (collectively, "RingConn") filed their response to the Complaint and Notice of Institution of Investigation. EDIS Doc. ID 821685 (May 16, 2024) ("RingConn Ans."). And on May 17, 2024, Respondents Ultrahuman Healthcare Pvt. Ltd., Ultrahuman Healthcare SP LLC, and Ultrahuman Healthcare Ltd. (collectively, "Ultrahuman") filed their response to the Complaint and Notice of Institution of Investigation. EDIS Doc. ID 821756 (May 17, 2024) ("Ultrahuman Ans.").

On June 26, 2024, Oura and Respondent Circular SAS ("Circular") filed a joint motion seeking termination of the investigation as to Circular based on a settlement agreement. Mot.

PUBLIC

Docket No. 1398-007. The motion was granted on July 9, 2024, and the Commission terminated the investigation as to Circular on Aug. 6, 2024. Order No. 12 (Jul. 9, 2024); Notice of Commission Determination Not to Review an Initial Determination Granting Joint Motion for Partial Termination of the Investigation as to Circular SAS Based on Settlement (Aug. 6, 2024).

On July 19, 2024, Oura filed a motion for partial termination of the investigation based on withdrawal of its allegations as to the '179 patent. *See* Mot. Docket No. 1398-008. The motion was granted on July 30, 2024, and the Commission terminated the investigation as to the '179 patent on August 22, 2024. *See* Order No. 13 (Jul. 30, 2024); Notice (Aug. 22, 2024).

On September 6, 2024, Oura filed a motion for partial termination of the investigation based on withdrawal of its allegations as to the '429 patent and as to claims 6-10 of the '178 patent. *See* Mot. Docket No. 1398-011. The motion was granted on September 16, 2024, and the Commission terminated the investigation as to the '429 patent and as to claims 6-10 of the '178 patent on October 7, 2024. *See* Order No. 16 (Sept. 16, 2024); Notice (Oct. 7, 2024).

Accordingly, the following claims remain at issue in this investigation:

Patent Number	Asserted Claims
11,868,178	1, 2, 12-14, 17, 18

See id.

A *Markman* hearing was held on August 15, 2024. *See* Transcript, EDIS Doc. ID 829740. And on October 23, 2024, the ALJ issued an order construing the disputed claims of the '178 patent. *See* Order No. 17: Construing Claim Terms (Oct. 23, 2024).

The private parties filed their pre-hearing briefs and statements on November 12, 2024. A pre-hearing conference is scheduled for December 11, 2024, and the evidentiary hearing is scheduled to be held December 11-17, 2024.

B. The Parties

1. Complainants

Complainant Ōura Health Oy is a Finnish company having a principal place of business in Oulu, Finland. *See* Compl. at ¶ 7; CPB at 5. Complainant Ouraring, Inc. (“Ouraring”) is a Delaware corporation having a principal place of business in San Francisco, California. Compl. at ¶ 6; CPB at 5. Ouraring is a wholly owned subsidiary of Ōura Health Oy and is the owner of the asserted patent. *See* Compl. at ¶¶ 8, 28; CPB at 5; JX-0003 (‘178 patent assignment). Ōura Health Oy and Ouraring, Inc., are referred to collectively herein as “Oura.” Approximately [REDACTED] workforce is based in the United States. *See* CPB at 5; CX-0730C; CX-0731C; CX-0506C. Oura is involved in the research and development, design, manufacturing, marketing, and sales of smart ring wearable devices and systems. *See* CPB at 5.

2. Respondents

a) Ultrahuman

Respondent Ultrahuman Healthcare Pvt. Ltd. is a company incorporated under the laws of India having a principal place of business in Bangalore, India. *See* Ultrahuman Ans. at ¶ 12; RPB at 14. Respondent Ultrahuman Healthcare SP LLC is a company incorporated under the laws of the United Arab Emirates having a principal place of business in Abu Dhabi, UAE. *See* Ultrahuman Ans. at ¶ 13; RPB at 14. Respondent Ultrahuman Healthcare Ltd. is a company incorporated under the laws of the United Kingdom having a principal place of business in London, UK. *See* Ultrahuman Ans. at ¶ 14; RPB at 14. Respondents Ultrahuman Healthcare SP LLC and Ultrahuman Healthcare Ltd. are wholly owned subsidiaries of Ultrahuman Healthcare Pvt. Ltd. *See* Ultrahuman Ans. at ¶¶ 13-14; RPB at 14. Respondents Ultrahuman Healthcare Pvt. Ltd., Ultrahuman Healthcare SP LLC, and Ultrahuman Healthcare Ltd. are referred to collectively herein as “Ultrahuman.” Ultrahuman’s primary business involves the design,

development, manufacture, and sale of the accused Ultrahuman products. *See* Ultrahuman Ans. at ¶¶ 15-16; RPB at 14. Ultrahuman admits that it sells its accused products for importation into the United States, imports the accused Ultrahuman products into the United States, and/or sells the accused Ultrahuman products within the United States after importation. *See* Ultrahuman Ans. at ¶ 16.

b) RingConn

Respondent Shenzhen Ninenovo Technology Ltd. is a Chinese corporation having a principal place of business in Shenzhen, China. RingConn Ans. at ¶ 17; RPB at 13. Respondent RingConn LLC is a Delaware limited liability company having a principal place of business in Wilmington, Delaware, and is a subsidiary of Shenzhen Ninenovo Technology Ltd. *See* RingConn Ans. at ¶ 18; RPB at 13. Shenzhen Ninenovo Technology Ltd. and RingConn LLC are referred to collectively herein as “RingConn.” RingConn designs, develops, and sells the accused RingConn products. *See* RingConn Ans. at ¶ 19. Finally, RingConn sells the accused RingConn products for importation into the United States, imports the accused RingConn products into the United States, and/or sells the accused RingConn products within the United States after importation. *See* CPB at 6; RingConn Ans. at ¶ 19; CX-0691C; CX-0984C; CX-0006C; CX-0008C; CX-0010C; CX-0476C; CX-0011C; CX-0477C; CX-0478C; CX-0479C; CX-0009C; CX-0480C; CX-0481C; CX-0482C.

C. The Patent at Issue – U.S. Patent No. 11,868,178

U.S. Patent No. 11,868,178 (“the ’178 patent”) is titled “Wearable Computing Device.” JX-0001 (’178 patent). The ’178 patent issued on January 9, 2024, from an application filed on May 24, 2023, claiming the benefit of earlier filed applications as follows:

Description	Parent Application	Parent Filing Date	Patent Number
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PUBLIC

This application is a continuation of	18/179,272	Mar. 6, 2023	
which is a continuation of	17/519,201	Nov. 4, 2021	11,599,147
which is a continuation of	17/013,348	Sept. 4, 2020	11,188,124
which is a continuation of	16/224,686	Dec. 18, 2018	10,768,666
which is a division of	15/444,217	Feb. 27, 2017	10,156,867
which is a division of	14/556,062	Nov. 28, 2014	9,582,034
which claims priority from provisionals	62/006,835 61/910,201	Jun. 2, 2014 Nov. 29, 2013	

Id. The '178 patent expires on November 28, 2034. *See* Compl. at ¶ 28. The '178 patent is assigned to Ouraring, Inc. *See id.*; Compl. Exh. 4; JX-0003 ('178 patent assignment). A Certificate of Correction issued on January 9, 2024, amending the language of claim 17. *See* JX-0002 ('178 Certificate of Correction).

Oura contends that the accused products infringe claims 1, 2, 12-14, 17, and 18 of the '178 patent. *See* CPB at XXX. For purposes of the technical prong of the domestic industry requirement, Oura contends that its domestic industry products satisfy each limitation of claims 1, 2, 12-14, 17, and 18 of the '178 patent. CPB at XXX. The claims at issue in this investigation read as follows:

Claim 1. A finger-worn wearable ring device, comprising:
an external housing component defining an outer circumferential surface of the finger-worn wearable ring device;
an internal housing component defining an inner circumferential surface of the finger-worn wearable ring device, the internal housing component coupled with the external housing component, wherein at least a portion of the inner circumferential surface of the internal housing component is configured to contact a tissue of a user when the finger-worn wearable ring device is being worn by the user;
a battery positioned within a cavity formed between the internal housing component and the external housing component, wherein the battery comprises a shape and size configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the

internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device;

a printed circuit board disposed between the internal housing component and the external housing component, wherein the printed circuit board extends through at least a second portion of the cavity of the finger-worn wearable ring device different from the first portion; and

one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component.

Claim 2. The finger-worn wearable ring device of claim 1, wherein the first portion of the cavity of the finger-worn wearable ring device is non-overlapping with the second portion of the cavity of the finger-worn wearable ring device.

Claim 12. The finger-worn wearable ring device of claim 1, wherein the battery comprises a curved battery, wherein an arc of the curved battery approximates a corresponding arc of the external housing component.

Claim 13. The finger-worn wearable ring device of claim 1, wherein the one or more sensors comprise a first light-emitting component configured to emit light associated with a first wavelength, and a second light-emitting component configured to emit light associated with a second wavelength different from the first wavelength.

Claim 14. The finger-worn wearable ring device of claim 13, wherein the first wavelength is associated with visible light, and wherein the second wavelength is associated with infrared light.

Claim 17. The finger-worn wearable ring device of claim 1, wherein the external housing component and the internal housing component define the cavity configured to at least partially surround the battery, and the printed circuit board, wherein one of the external housing component or the internal housing component comprises:

a first side wall and a second side wall that extend between the internal housing component and the external housing component, wherein the cavity is defined at least in part by the outer circumferential surface, the inner circumferential surface, the first side wall, and the second side wall.

Claim 18. The finger-worn wearable ring device of claim 17, wherein the first side wall, the second side wall, or both, are substantially perpendicular to the inner circumferential surface, the outer circumferential surface, or both.

JX-0001 ('178 patent) at claims 1, 2, 12-14, 17, 18; JX-0003 ('178 Certificate of Correction).

D. The Products at Issue

1. The Accused Products

Oura contends that the smart ring wearable devices, systems, and components thereof manufactured and/or sold by Ultrahuman and RingConn (the “Accused Products”) infringe certain claims of the asserted patent. *See* CPB at 14-15. The Accused Products include the following smart rings together with their corresponding apps:

Respondent	Accused Products
Ultrahuman	Ultrahuman Ring AIR
RingConn	RingConn Smart Ring (Gen. 1) RingConn Smart Ring (Gen. 2)

See CPB at 14-15. Oura and RingConn have stipulated that the RingConn Smart Ring (Gen. 1) is representative of the RingConn Smart Ring (Gen. 2) for purposes of this investigation. *See* JX-0008C (Stipulation Regarding Representative RingConn Products).

2. The Domestic Industry Products

The domestic industry product is the Oura Ring (“DI Product”), including both Gen. 3 and Gen. 4, as well as the corresponding iOS and Android apps. *See* CPB at 11-14.

E. Applicable Legal Standards

1. Claim Construction

Claim construction is generally a matter of law. *Markman v. Westview Instruments Inc.*, 52 F.3d 969, 976 (Fed. Cir. 1995) (en banc) (“*Markman*”), *aff’d*, 517 U.S. 370 (1996). However, claim construction may involve underlying factual determinations. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015). The ordinary and customary meaning of the language of a claim to one of ordinary skill in the art at the time of the invention is the starting point for the analysis. *Phillips v. A.W.H. Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en

banc) (“*Phillips*”); *Alloc, Inc. v. U.S. International Trade Commission*, 342 F.3d 1361, 1368 (Fed. Cir. 2003) (“*Alloc*”).

Every term in a claim is presumed to have meaning and any construction that would render a claim term superfluous is discouraged. *See Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1119 (Fed. Cir. 2004) (“While not an absolute rule, all claim terms are presumed to have meaning in a claim.”) (“*Innova*”); *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1115 (Fed. Cir. 2002) (“An alternative construction would render the first monitoring term meaningless. That construction is therefore improper; this court will not rewrite claims.”). In short, “[t]he claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Phillips*, 415 F.3d at 1314; *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“*Vitronics*”); *ACTV, Inc. v. The Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003) (“*ACTV*”) (“the context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms”).

However, “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. The specification may act as a dictionary, explaining the invention and defining the terms used in the claims, but if a patentee is acting as his or her own lexicographer, any special definition given to a word must be clear in the specification. *Id.* at 1316; *Vitronics*, 90 F.3d at 1582-83. Moreover, the specification (and prosecution history) should not “enlarge, diminish or vary” the limitations of the claims. *Vitronics*, 90 F.3d at 1582-83; *Markman*, 52 F.3d at 979-80; *Intel Corp. v. U.S. Int’l*

Trade Comm'n, 946 F.2d 821, 836 (Fed. Cir. 1991) (“Where a specification does not require a limitation, that limitation should not be read from the specification into the claims.”).

In addition, the prosecution history “provides evidence of how the PTO and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317. As such, “it may inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*; *Vitronics*, 90 F.3d at 1582-83; *see also Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (“The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution.”).

Extrinsic evidence may also be considered, if needed, to assist in determining the meaning or scope of technical terms in the claims. *Phillips*, 415 F.3d at 1317-18; *Vitronics*, 90 F.3d at 1582-83. Expert testimony may be useful to “provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.” *Phillips*, 415 F.3d at 1318. However, it remains the intrinsic record, including the specification and prosecution history, that is the most significant evidence and thus determinative for interpreting the legally operative meaning of patent claim language. *Id.* at 1317.

2. Infringement

A determination of patent infringement involves a two-step analysis: first, the claims must be properly construed, and second, the properly construed claims must be compared to the allegedly infringing device. *See, e.g., Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1370 (Fed. Cir. 2010). The first step, claim construction, is a matter of law, but the second step,

comparison of the claims to the accused product, is a question of fact. *See, e.g., id.* Complainant has the burden of demonstrating infringement by a preponderance of the evidence. *Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.*, 204 F.3d 1360, 1364 (Fed. Cir. 2000) (“it is axiomatic that the *patentee* bears the burden of proving infringement”) (emphasis in original); *see also, e.g., Applied Med. Resources Corp. v. United States Surgical Corp.*, 448 F.3d 1324, 1333 (Fed. Cir. 2006) (“As the party asserting infringement, [patentee] ultimately bears the burden of proof.”).

In order to prove direct infringement under 35 U.S.C. § 271(a), “the [complainant] must establish by a preponderance of the evidence that one or more claims of the patent read on the accused device literally or under the doctrine of equivalents.” *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1310 (Fed. Cir. 2005). “Literal infringement requires that each and every claim limitation be present in the accused product.” *Abraxis Bioscience, Inc. v. Mayne Pharma (USA) Corp.*, 467 F.3d 1370, 1378 (Fed. Cir. 2006). “If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law.” *Amgen, Inc. v. F. Hoffman-La Roche Ltd.*, 580 F.3d 1340, 1374 (Fed. Cir. 2009). But, even if an accused product does not literally infringe the asserted claim, infringement may still be found under the doctrine of equivalents. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950).

In addition to direct infringement, a violation of Section 337 may also be found based on induced infringement under 35 U.S.C. § 271(b) or contributory infringement under 35 U.S.C. § 271(c). *See, e.g., Certain Hardware Logic Emulation Systems and Components Thereof*, Inv. No. 337-TA-383, Comm’n Op. at 18-19, (Mar. 1998) (“*Hardware Logic*”) (interpreting Section 337 to cover indirect infringement). A finding of inducement requires “knowledge that the

induced acts constitute patent infringement.” *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S.Ct. 2060, 2068 (2011); *see also Commil USA, LLC v. Cisco Systems, Inc.*, 135 S.Ct. 1920, 1926 (2015). The Federal Circuit has upheld the Commission’s authority to cover “goods that were used by an importer to directly infringe post-importation as a result of the seller’s inducement.” *Suprema, Inc. v. Int’l Trade Comm’n*, 796 F.3d 1338, 1352-53 (Fed. Cir. 2015) (en banc). Similarly, “[i]n order to succeed on a claim of contributory infringement, in addition to proving an act of direct infringement, plaintiff must show that defendant knew that the combination for which its components were especially made was both patented and infringing and that defendant’s components have no substantial non-infringing uses.” *Cross Med. Prods., Inc.*, 424 F.3d at 1312 (internal quotation marks omitted).

3. Domestic Industry (Technical Prong)

Section 337 declares unlawful the importation, the sale for importation, or the sale within the United States after importation of articles that infringe a valid and enforceable U.S. patent only if “an industry in the United States, relating to articles protected by the patent ... concerned, exists or is in the process of being established.” 19 U.S.C. § 1337(a)(2). The requirement that an industry exists includes both an economic prong (*i.e.*, there must be an industry in the United States) and a technical prong (*i.e.*, that industry must relate to articles protected by the patent at issue). *See, e.g., Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm’n Op. at 55 (Jan. 2004). The complainant bears the burden of proving the existence of a domestic industry. *See, e.g., Certain Methods of Making Carbonated Candy Products*, Inv. No. 337-TA-292, Comm’n Op. at 34-35 (Jun. 1991).

The technical prong of the domestic industry requirement is satisfied when it is determined that the complainant practices at least one claim of each asserted patent. *Alloc, Inc.*

v. Int'l Trade Comm'n, 342 F.3d 1361, 1375 (Fed. Cir. 2003). The test for determining whether a complainant practices a claim of a patent at issue is essentially the same as that for infringement, i.e., it requires that a complainant's domestic product practice each limitation of a claim. *Id.*

4. Invalidity

a) Anticipation

A determination of whether a prior art reference anticipates a claim under 35 U.S.C. § 102 is a two-step inquiry: the first step is the proper construction of the claims, and the second step is the comparison of the properly construed claims to the prior art. *See, e.g., Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003). “‘Anticipation requires the presence in a single prior art disclosure of all of the elements of a claimed invention arranged as in the claim.’ The requirement that the prior art elements themselves be ‘arranged as in the claim’ means that claims cannot be ‘treated . . . as mere catalogs of separate parts, in disregard of the part-to-part relationships set forth in the claims and that give the claims their meaning.’” *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010) (citation omitted). However, the disclosure of the prior art reference may be inherent rather than express – “if the prior art necessarily functions in accordance with, or includes, the claim’s limitations, it anticipates.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1376 (Fed. Cir. 2005) (internal quotation marks omitted). Anticipation is a question of fact. *Finisar Corp. v. The DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir.), *cert. denied*, 129 S. Ct. 754 (2008).

b) Obviousness

With respect to obviousness, the key question for purposes of determining whether claims are invalid is whether “the differences between the subject matter sought to be patented

and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103(a). This analysis hinges on the four Graham factors – (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *see also, e.g., Scanner Technologies Corp. v. ICOS Vision Sys. Corp.*, 528 F.3d 1365, 1379-80 (Fed. Cir. 2008). The ultimate conclusion as to whether the claimed invention is obvious is a question of law based on these underlying facts. *See, e.g., Pharmastem Therapeutics, Inc. v. Viacell, Inc.*, 491 F.3d 1342, 1359 (Fed. Cir. 2007), cert. denied, 552 U.S. 1258 (2008).

The U.S. Supreme Court has explained that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). Thus, “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.” *Id.* at 419. Nevertheless, the analysis must still identify “an apparent reason to combine known elements in the fashion claimed by the patent at issue.” *Id.* at 418.

II. STATUTORY AUTHORITY

The Commission has statutory authority to investigate the alleged violations of Section 337 by Ultrahuman and RingConn pursuant to Section 337 of the Tariff Act of Tariff Act of 1930, as amended, 19 U.S.C. § 1337. *See Certain Compact Wallets and Components Thereof*, Inv. No. 337-TA-1355, Comm’n Op. at 10-11 (Aug. 13, 2024). Respondents do not address this

issue in their pre-hearing brief and thus do not dispute the Commission's authority. *See generally* RPB.

III. OWNERSHIP

Oura contends that it is the owner of the Asserted Patent by a recorded assignment. *See* CPB at 33-34; JX-0003 ('178 patent assignment). This recording "creates a presumption of validity as to the assignment." *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1328 (Fed. Cir. 2010). Respondents do not dispute that Oura owns the asserted the '178 patent in this investigation. *See generally* RPB. Accordingly, the Staff expects the evidence to show that Oura is the owner of the asserted patent.

IV. IMPORTATION

To prove a violation of section 337, complainants must show "[t]he importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee" of products accused of infringement. 19 U.S.C.

§§ 1337(a)(1)(A)-(B). The evidence is expected to show that Ultrahuman manufactures the accused Ultrahuman products in India and imports them into the United States. *See* CPB at 35-36; CX-1386C (Kumar Dep. Tr.) at 61:19-23, 71:24-72:3; CX-1008 ([REDACTED]); CX-1009 ([REDACTED]); CX-0693 ([REDACTED]); CX-0486 ([REDACTED]); CX-0690C ([REDACTED]) at Resp. Nos. 86, 87 ([REDACTED]); CX-0772C ([REDACTED]) at Resp. Nos. 4, 5, 8. The evidence is also expected to show that RingConn manufactures the accused RingConn products in China and imports the finished products into the United States. *See* CPB at 36; CX-1013 (invoice evidencing purchase in the United States); CX-1014 (RingConn shipping policy); CX-1015 ([REDACTED])

shipment tracking); CX-0694 (photo of ring shipped from China to the United States); CX-1387C (Hao Dep. Tr.) at 27:21-28:3, 43:25-44:12; CX-0771C (interrogatory responses) at Resp. No. 4; CX-0691 (responses to requests for admission) at Resp. Nos. 86-89 (admitting importation); CX-0984C (interrogatory responses) at Resps. Nos. 5, 6, 8, 9.

V. U.S. PATENT NO. 11,868,178

A. Claim Construction

1. Level of Ordinary Skill in the Art

The asserted patents generally relate to wearable computing devices, such as smart rings, which monitor a user's activity and biosignals to "improve lifestyles, ease access to technology and help monitor activity within the wearer's body." *See* JX-0001 ('178 patent) at 1:39-46. A person of ordinary skill in this field of art would have been familiar with the electrical and structural properties of wearable consumer electronics devices, as well the capture, storage, and processing of biosignal information. *See generally* JX-0001 ('178 patent) at 1:50-5:2. The Staff thus submits that such a person would have been a well-educated professional.

Consistent with the relative complexity of the asserted patent's disclosure, the Judge found that a person of ordinary skill in the art of the '178 patent at the time of the invention would have had "(1) at least three years of experience with research and development of health or medical devices or consumer products; and (2) a related degree (e.g., at least a bachelor's degree) in mechanical, industrial, or electrical engineering, or a related field." Order No. 17: Construing Claim Terms at 4-5 (Oct. 23, 2024).

2. Order No. 17: Construing Claim Terms

Order No. 17 issued on October 23, 2024, construing certain terms of the asserted claims of the '178 patent as follows:

Claim Language	Construction Set Forth in Order No. 12
“an [internal/external] housing component”	Plain and ordinary meaning, which is “an [internal/external] structure that encloses space and which does not necessarily exclude potting material”
“circumferential”	Plain and ordinary meaning, which “does not require a closed shape”

See Order No. 17 at 14, 17 (Oct. 23, 2024).

3. Agreed Upon Terms

The parties agree that the following terms should be construed as indicated below:

Claim Language	Agreed Construction
“A finger-worn wearable ring device”	The preamble is limiting.
“[positioned/configured to fit] within a cavity”	Plain and ordinary meaning, which is: “[positioned/configured to fit] within a hollow space”
“[the internal housing component] coupled with [the external housing component]”	Plain and ordinary meaning, which is “[the internal housing component] is connected with [the external housing component]”

See Supplemental Joint Claim Construction Chart, EDIS Doc. ID 830148 (Aug. 20, 2024).

B. Infringement

Oura contends that the accused RingConn and Ultrahuman products infringe claims 1, 2, 12-14, 17, and 18 of the ’178 patent. *See* CPB at 38-157. In support of its position, Oura is expected to rely upon the expert testimony of Dr. Majid Sarrafzadeh to address infringement on an element-by-element basis. *See id.* Conversely, Respondents contest almost every limitation of the asserted claims. *See* RPB at 43-99, 107-137. For the reasons set forth below, the Staff expects the evidence to show that the Accused Products infringe claims 1, 2, and 12-14 of the ’178 patent. *See* CPB at 38-157. The Staff, however, does not expect the evidence to show infringement as to claims 17 and 18 of the ’178 patent. *See* RPB at 98-99 (RingConn), 135-137 (Ultrahuman).

1. Claim 1

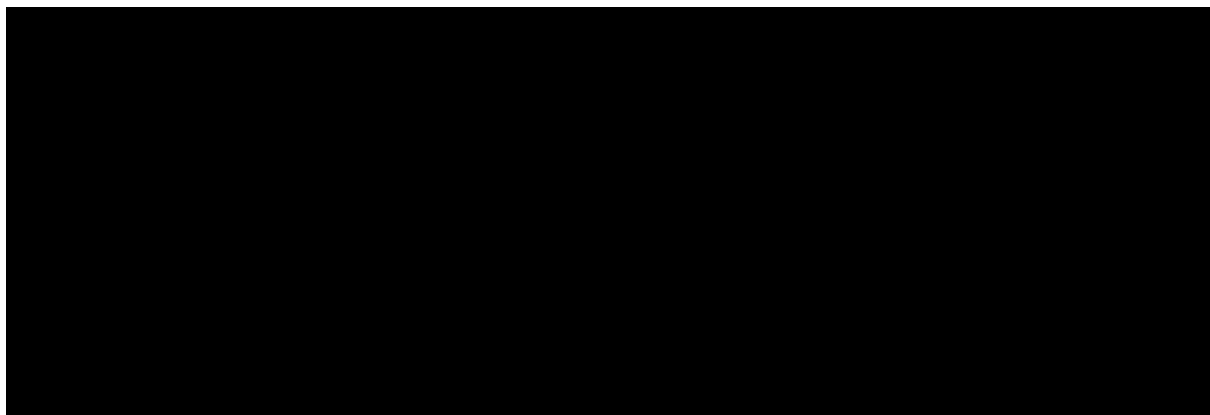
a) Limitation 1[pre]: “A finger-worn wearable ring device”

Oura contends that the Accused Products satisfy limitation 1[pre] of the ’178 patent, which recites “[a] finger-worn wearable ring device.” *See* CPB at 38-41. As will be explained by Dr. Sarrafzadeh, this limitation is clearly met by the Accused Products for the reasons set forth by Oura and is not contested by Respondents. *See* CPB at 38-41; CX-0536; CX-0538; CX-0539; CX-0375; CX-0693; CPX-0002; CX-0843; CX-0405; CX-0704C; RPB at 43-96 (RingConn); 107-133 (Ultrahuman). The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[pre] of the ’178 patent. *See id.*

b) Limitation 1[a]: “an external housing component defining an outer circumferential surface of the finger-worn wearable ring device”

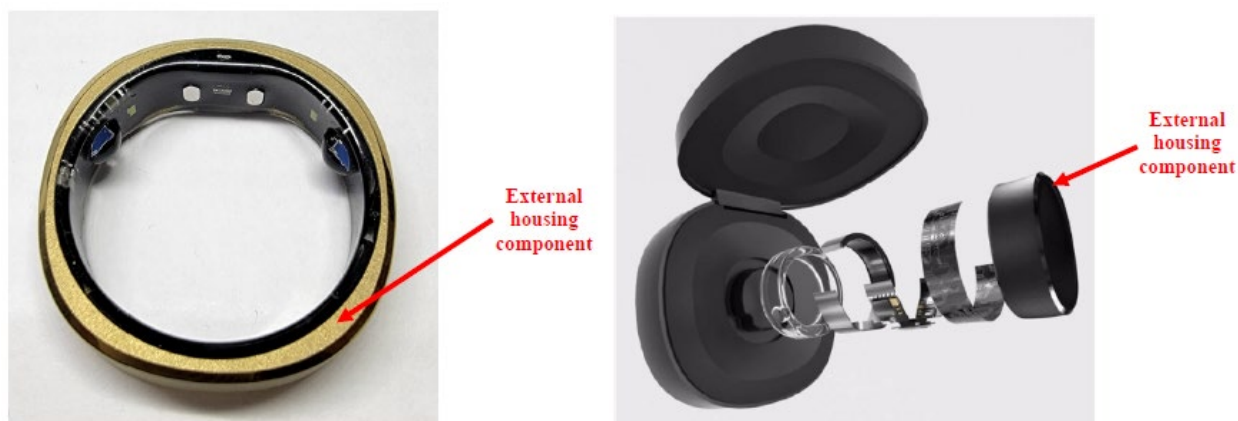
Oura contends that the Accused Products satisfy limitation 1[a] of the ’178 patent, which recites “an external housing component defining an outer circumferential surface of the finger-worn wearable ring device.” *See* CPB at 43-50. As will be explained by Dr. Sarrafzadeh, the accused products each have an external metallic housing structure that satisfies this limitation. *See id.*; CX-0314 (photograph of Ultrahuman ring); CX-0537 (Ultrahuman images); CX-0406 (photograph of RingConn ring); CX-0567 (RingConn images).

Ultrahuman Ring AIR: As shown in the figures below, the accused Ultrahuman Ring AIR has an external housing component defining an outer circumferential surface of the finger-worn wearable ring device. *See* CPB at 44-46; CX-0314 (photograph of Ultrahuman ring); CX-0537 (Ultrahuman images).



CX-0314; CX-0537.

RingConn Smart Ring: And as shown in the figures below, the accused RingConn Smart Ring also has an external housing component defining an outer circumferential surface of the finger-worn wearable ring device. *See* CPB at 47-50; CX-0406 (photograph of RingConn ring); CX-0567 (RingConn images).



CX-0406; CX-0567.

Ultrahuman does not contest that this limitation is met by the accused Ultrahuman Ring AIR. *See* RPB at 107-133. RingConn, however, contends that the accused RingConn Smart Ring does not satisfy limitation 1[a]. *See* RPB at 44. In this regard, RingConn’s expert, Mr. Alarcon, is expected to testify at the evidentiary that the RingConn Smart Ring does not have an external housing component because its outer surface “is not circular, ovular, or elliptical and

does not have a circumference.” *See* RPB at 44. RingConn’s position, however, is contrary to the patent and the plain and ordinary meaning of the term “circumference.”

First, the ’178 patent does not require that the external housing be perfectly circular, ovular, or elliptical. *See* CPB at 43-50. In this regard, the ’178 patent explains that “although depicted as being circular, the finger space of the [ring] can be any shape...to accommodate users with atypical finger profiles,” including “ovular, elliptical, or the like.” *See* JX-0001 (’178 patent) at 16:65-17:1. In this regard, “[t]he external diameter d2 can also be any reasonable size or shape....” *See id.* at 17:9-11. Clearly, the specification of the ’178 patent did not intend to limit the shape and configuration of the claimed device except that it be suitable as “a wearable accessory.” *See id.* at 8:67-9:4. And furthermore, as will be explained by Dr. Sarrafzadeh, a person of ordinary skill in the art would understand that the external housing of the RingConn Smart Ring defines a circumferential surface of the ring, under the plain and ordinary meaning of the word “circumferential.” *See* CPB at 43-50.

Second, RingConn’s position is contrary to the Judge’s construction of the term “circumferential” according to its plain and ordinary meaning. *See* CPB at 43-50; *See* Order No. 17 at 17 (Oct. 23, 2024). As discussed by the Staff in its *Markman* brief, the ’178 patent uses the term “circumferential” consistent with its plain and ordinary meaning. *See* Claim Construction Brief of the Commission Investigative Staff, EDIS Doc. ID 828258 at 12-13 (Aug. 2, 2024) (“SMB”). Consistent with dictionary definitions, the term “circumferential” is used in the ’178 patent to describe the outer surface or boundary (i.e., the periphery) of the finger-worn wearable ring device. *See id.* at Exh. 1, *Circumference*, MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY (10th ed. 1993) (defining “circumference” as “external boundary or surface of a figure or object”

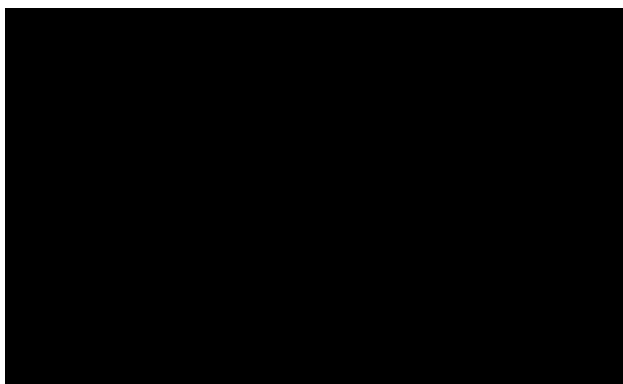
and a synonym for “periphery”). The external housing of the RingConn Smart Ring clearly defines the outer surface of the finger-worn wearable ring. *See* CPB at 43-50.

The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[a] of the ’178 patent. *See id.*

- c) *Limitation 1[b(i)]: “an internal housing component defining an inner circumferential surface of the finger-worn wearable ring device”*

Oura contends that the Accused Products satisfy limitation 1[b(i)] of the ’178 patent, which recites “an internal housing component defining an inner circumferential surface of the finger-worn wearable ring device.” *See* CPB at 54-64. As will be explained by Dr. Sarrafzadeh, the accused products each have an internal housing structure that satisfies this limitation. *See id.*; CX-0314 (photograph of Ultrahuman ring); CX-0406 (photograph of RingConn ring).

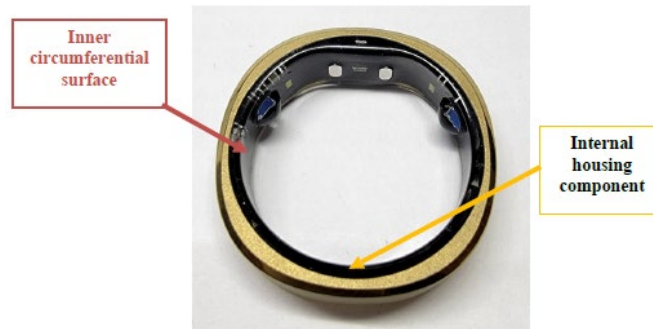
Ultrahuman Ring AIR: As shown in the figures below, the accused Ultrahuman Ring AIR has an internal housing component defining an inner circumferential surface of the finger-worn wearable ring device. *See* CPB at 55-60; CX-0537 (Ultrahuman images).



CX-0537.

RingConn Smart Ring: And as shown in the figures below, the accused RingConn Smart Ring also has an internal housing component defining an inner circumferential surface of

the finger-worn wearable ring device. *See* CPB at 60-64; CX-0406 (photograph of RingConn ring).



CX-0406.

Respondents contest that limitation 1[b(i)] is met by the Accused Products because the internal housing is formed of potting material, which they argue “is not a structure that encloses space.” *See* RPB at 46-58 (RingConn); 107-112 (Ultrahuman). But in this regard, Respondents are wrong. Both the Ultrahuman Ring AIR and the RingConn Smart Ring have a battery, PCB, sensors, and other components that are entirely within the alleged internal and external housing components. *See* CPB at 54-64; CX-0537; RX-0406. Thus, logically, those internal components must be taking up space within the structure formed by the internal and external housing components. *See id.* It makes no difference that the potting material conforms to the internal components – those components are indisputably physical objects and thus, by definition, have weight and take up space. *See id.* And the space taken up by those internal components is the space enclosed by the alleged housing components. *See id.* Respondents’ argument should thus be rejected.

Respondents also argue that the Accused Products do not satisfy limitation 1[b(i)] because the alleged internal housing component does not define an inner circumferential surface. *See* RPB at 58-68 (RingConn); 112-118 (Ultrahuman). This argument, however, is inconsistent

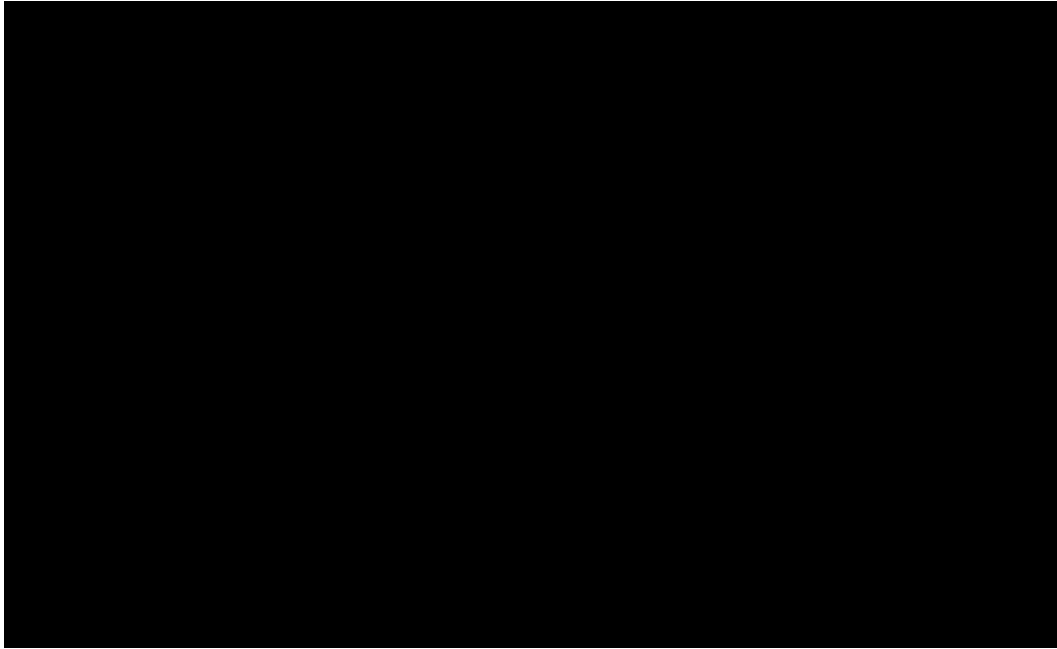
with the Judge’s construction of “circumferential” and the plain and ordinary meaning of the term for the reasons set forth above with respect to limitation 1[a]. *See* CPB at 54-64. As will be explained by Dr. Sarrafzadeh, a person of ordinary skill in the art at the time of invention would understand that the Accused Products satisfy limitation 1[b(i)] even though portions of their internal circumferential surfaces are not perfectly round. *See* CPB at 54-64.

The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[b(i)] of the ’178 patent. *See id.*

d) Limitation 1[b(ii)]: “the internal housing component coupled with the external housing component”

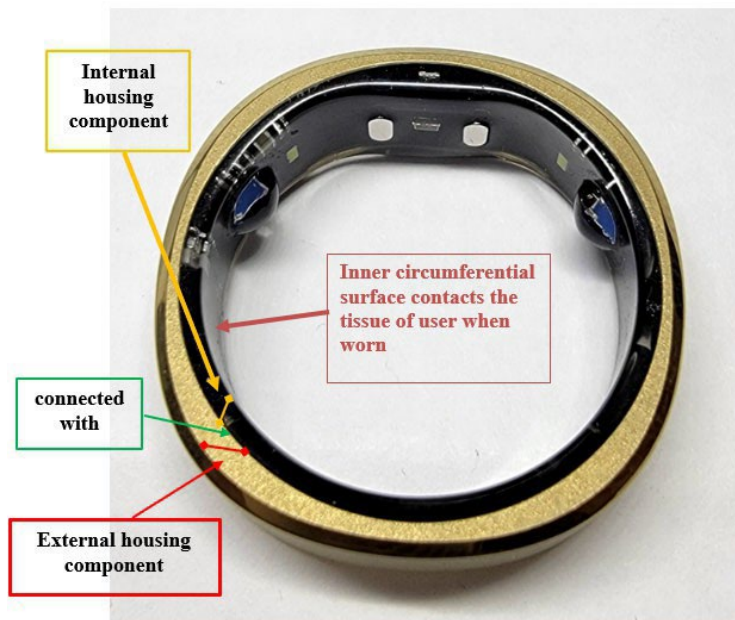
Next, Oura contends that the Accused Products satisfy limitation 1[b(ii)] of the ’178 patent, which recites “the internal housing component coupled with the external housing component.” *See* CPB at 69-72. As will be explained by Dr. Sarrafzadeh, the Accused Products each have an internal housing component that is coupled with the external housing component as required by this limitation. *See id.*; CX-0314 (photograph of Ultrahuman ring); CX-0406 (photograph of RingConn ring).

Ultrahuman Ring AIR: As shown in the figure below, the accused Ultrahuman Ring AIR has an internal housing component that is coupled with or connected to the external housing component. CPB at 69-72; CX-0314.



CX-0314.

RingConn Smart Ring: And as shown in the figures below, the accused RingConn Smart Ring also has an internal housing component that is coupled with or connected to the external housing component. *See* CPB at 67-72; CX-0406 (photograph of RingConn ring).



CX-0406.

According to Respondents limitation 1[b(ii)] is not met by the Accused Products because their internal housing components are not connected with their external housing component. *See* RPB at 68 (RingConn); 118-119 (Ultrahuman). But in this regard, Respondents are clearly wrong as figures above plainly show that the internal housing components and the external housing components are connected with one another, as will also be explained at the hearing by Dr. Sarrafzadeh. *See* CPB at 69-72; CX-0314; CX-0406.

The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[b(ii)] of the '178 patent. *See id.*

- e) *Limitation 1[c]: “a battery positioned within a cavity formed between the internal housing component and the external housing component, wherein the battery comprises a shape and size configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device”*

Oura contends that the Accused Products satisfy limitation 1[c] of the '178 patent, which recites “a battery positioned within a cavity formed between the internal housing component and the external housing component, wherein the battery comprises a shape and size configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device.” *See* CPB at 75-86. Oura relies upon the expert testimony of Dr. Sarrafzadeh, who will testify that the Accused Products have a battery positioned within a cavity formed between the internal housing components and the external housing components of those products as required by limitation 1[c]. *See id.*; CX-0056 (Ultrahuman CT image); CX-0065 (RingConn CT image). Conversely, Respondents contend that this limitation is not satisfied by the Accused Products

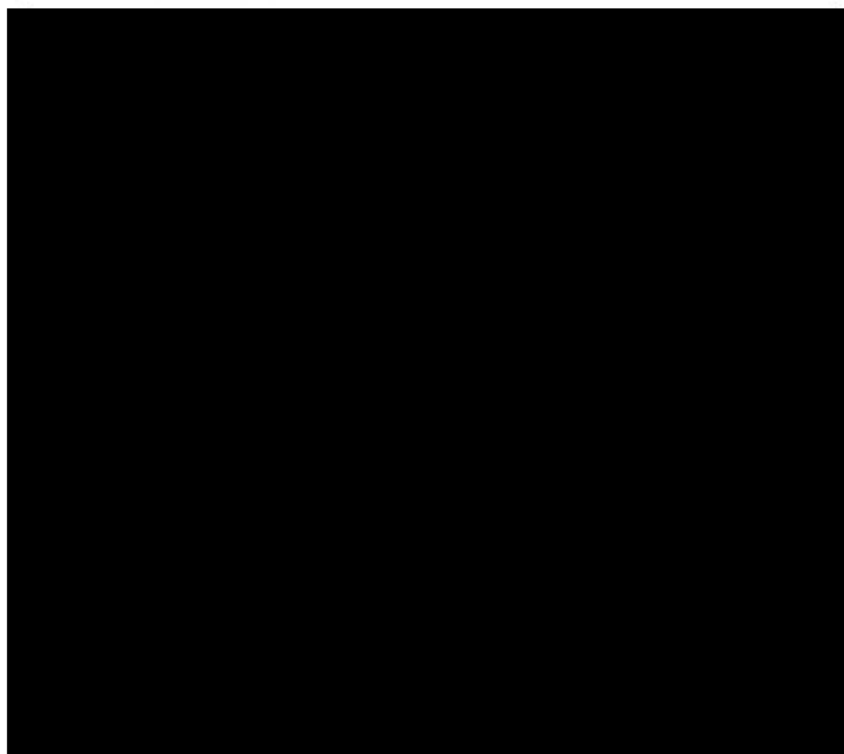
because (i) they do not have cavity, (ii) the alleged cavity is not formed between the internal and external housing components, (iii) the products do not have a battery with a shape and size configured to fit within the cavity, and (iv) the battery does not fit between the internal and external circumferential surfaces. *See* RPB at 68-86 (RingConn); 119-128 (Ultrahuman).

In the Staff's view, the evidence will clearly show that the Accused Products have a battery with a size and shape configured to fit within a cavity between the internal and external circumferential surfaces. *See* CPB at 75-86; X-0056 (Ultrahuman CT image); CX-0065 (RingConn CT image). However, it is a close call as to whether the cavity is formed entirely within the internal housing component, or is formed between the internal and external housing components as required by limitation 1[c]. *See id.*; RPB at 75-84 (RingConn); 124-126 (Ultrahuman).

As will be explained by Dr. Sarrafzadeh, each of the Accused Products: (i) has a battery positioned within a cavity formed within the internal and external housing components, (ii) the battery is shaped to fit within the cavity formed between the inner and outer circumferential surfaces, and (iii) the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device, as recited by limitation 1[c]. CPB at 75-86; CX-0056 (Ultrahuman CT image); CX-0065 (RingConn CT image). The placement of the batteries within the cavities is clearly shown CT images relied upon by Oura. *See id.* These images, however, do not clearly show whether alleged cavities are formed between the internal and external housing components, or are entirely formed within the potting material of the internal housing components. *See* CX-0056; CX-0065. Each of the Accused Products is addressed below.

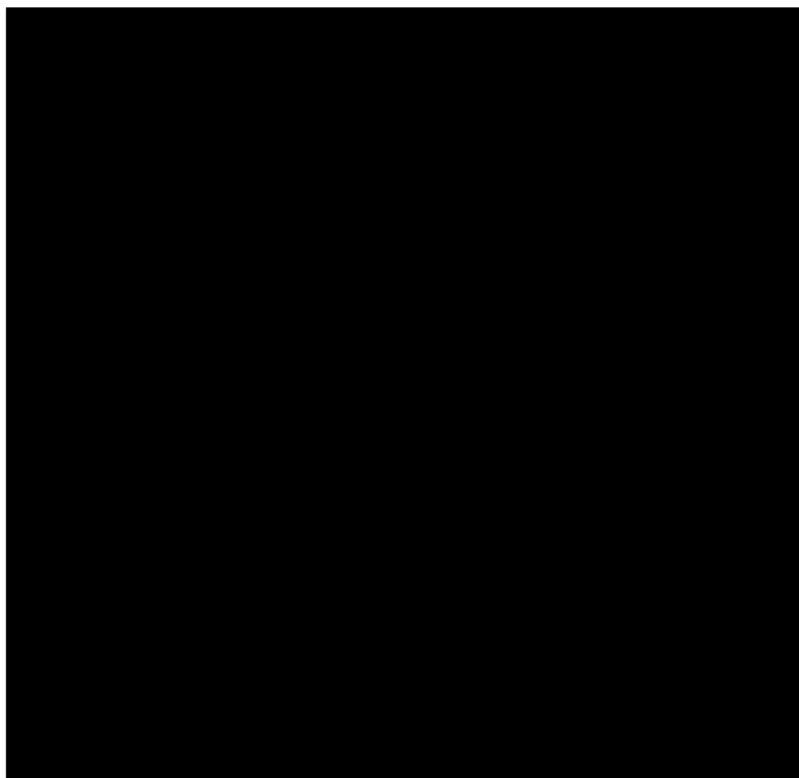
Ultrahuman Ring AIR: As shown in the figure below, the accused Ultrahuman Ring AIR has “a battery positioned within a cavity..., wherein the battery comprises a shape and size

configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device.” See CPB at 75-86; CX-0056 (Ultrahuman CT image).



CX-0056.

RingConn Smart Ring: Similarly, the accused RingConn Smart Ring has “a battery positioned within a cavity..., wherein the battery comprises a shape and size configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device.” See CPB at 75-86; CX-0065 (RingConn CT image).



CX-0065.

“Formed Between”: The primary question as to infringement is whether the battery is positioned within a cavity that is “formed between the internal housing component and the external housing component” as required by limitation 1[c]. *See* CPB at 75-86; RPB at 75-84 (RingConn); 124-126 (Ultrahuman). It is unclear from the CT images relied upon by Oura as to whether the potting material forming the internal housing component entirely encapsulates the internal components of the Accused Products, such that the alleged cavities are formed entirely within the internal housing component, as opposed to between the internal and external housing components as required by the claim. In this regard, Dr. Sarrafzadeh is expected to testify that the internal components of the Accused Products are taped to the external housing component before potting material is applied to form the internal housing component. *See* CPB at 75-86. For this reason, Dr. Sarrafzadeh is of the opinion that the cavity is not entirely within internal

housing component, but extends between the internal and external housing components as required by limitation 1[c]. *See id.*

Conversely, Respondents contend that there is no cavity, and even if the space occupied by the internal components were a cavity, it is not formed between the internal and external housing components. RPB at 75-84 (RingConn); 124-126 (Ultrahuman). Respondents rely upon the testimony of Mr. Alarcon. *See id.* However, Mr. Alarcon's opinions that the Accused Products do not have a cavity are unpersuasive. *See id.* Clearly, as demonstrated above, the internal components of the Accused Products are located in a space formed within them. *See* CX-0065; CX-0056. Furthermore, Mr. Alarcon could not answer Oura's questions at his deposition regarding whether or not the internal components were adhered to the external housing component before the potting material is applied. *See* CPB at 75-86. While it appears that the potting material of the internal housing components may form between the alleged cavities and the external housing components, the Staff expects Dr. Sarrafzadeh's testimony to show that is more likely than not that the alleged cavities in the Accused Products are formed between the internal and external housing components as required by limitation 1[c]. *See* CPB at 75-86; CX-0065 (RingConn CT image).

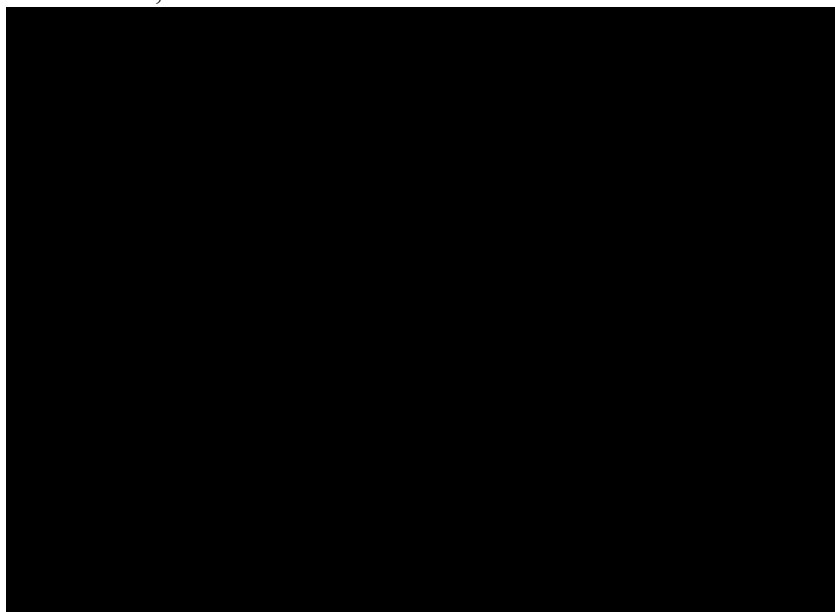
The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[c] of the '178 patent. *See id.*

- f) *Limitation 1[d]: "a printed circuit board disposed between the internal housing component and the external housing component, wherein the printed circuit board extends through at least a second portion of the cavity of the finger-worn wearable ring device different from the first portion"*

Oura contends that the Accused Products satisfy limitation 1[d] of the '178 patent. *See* CPB at 91-107. As will be explained by Dr. Sarrafzadeh, the Accused Products each have a

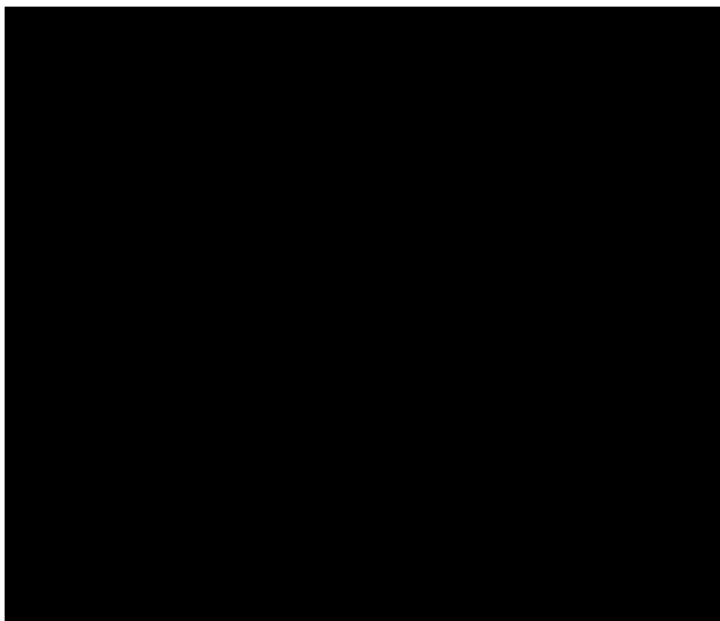
printed circuit board disposed between the internal housing component and the external housing component that extends through at least a second portion of the cavity as required by this limitation. *See id.*; CX-0058; CX-0067.

Ultrahuman Ring AIR: As shown in the figure below, the accused Ultrahuman Ring AIR has a printed circuit board disposed between the internal housing component and the external housing component and extending through at least a second portion of the cavity, as claimed. *See* CPB at 91-97; CX-0058.



CX-0058.

RingConn Smart Ring: And as shown in the figures below, the accused RingConn Smart Ring has a printed circuit board disposed between the internal housing component and the external housing component and extending through at least a second portion of the cavity, as claimed. *See* CPB at 97-107; CX-0067.



CX-0067.

While Respondents dispute that the Accused Products have a cavity and housing components as addressed above with respect to limitations 1[a]-1[c], they do not dispute that each of the Accused Products has a printed circuit board that is located within ring housing. *See* RPB at 87-96 (RingConn); 128-133 (Ultrahuman). For the reasons set forth above with respect to limitations 1[a]-1[c], the Staff expects the evidence to show that the Accuse Products satisfy the “cavity” and “housing” limitations. And as shown in the CT images above, the Accused Products further include a printed circuit board disposed in the cavity within the housing components. *See* CBP at 91-107; CX-0058; CX-0067.

The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[d] of the ’178 patent. *See id.*

- g) *Limitation 1[e]: “one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component”*

Oura contends that the Accused Products satisfy limitation 1[e] of the '178 patent, which recites “one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component.” See CPB at 112-115. Respondents appear to dispute this limitation solely on the basis that the Accused Products do not have an internal housing component. See RPB at 43-96, 133. But as discussed above with respect to limitation 1[b(i)], the Staff expects the evidence to show that the Accused Products satisfy the “internal housing component” limitation. See CPB at 54-64. Respondents do not appear to otherwise dispute that the Accused Products satisfy limitation 1[e]. See RPB at 46-96, 133. Oura relies upon the expert testimony of Dr. Sarrafzadeh, who is expected to testify that the Accused Products have “one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component” as required by limitation 1[e]. See CPB at 112-115.

The Staff thus expects the evidence to show that the Accused Products satisfy limitation 1[e] of the '178 patent. See *id.*

h) *Conclusion*

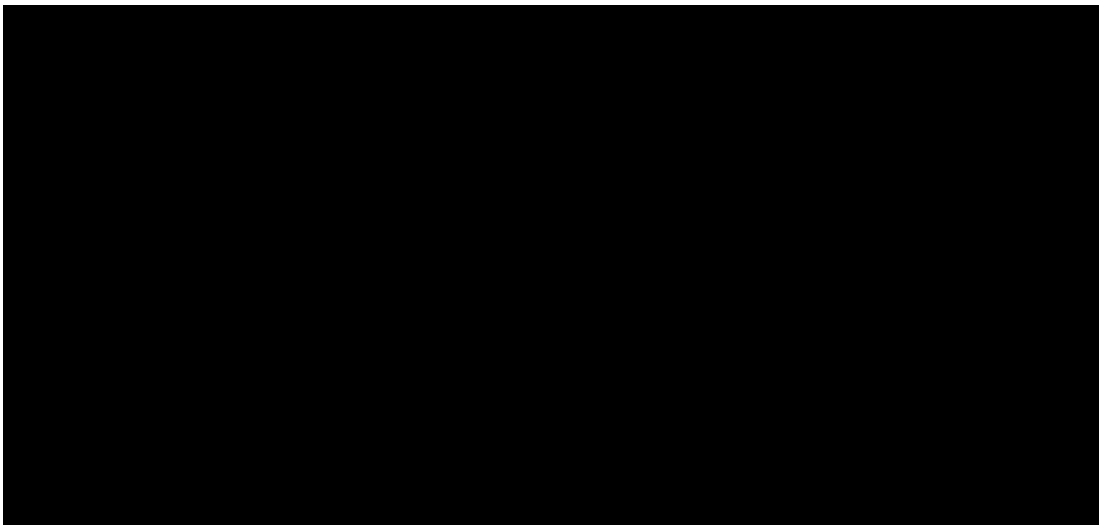
For the reasons set forth above, the Staff expects the evidence to show that the Accused Products satisfy each limitation and thus infringe claim 1 of the '178 patent. See CPB at 38-115.

2. Claim 2

Oura contends that the Accused Products satisfy the limitations of claim 2 of the '178 patent.” See CPB at 117-119. Claim 2 depends from claim 1 and thus includes all the limitations of claim 1. See JX-0001 ('178 patent) at cl. 2. Claim 2 reads as follows:

Claim 2. The finger-worn wearable ring device of claim 1, wherein the first portion of the cavity of the finger-worn wearable ring device is non-overlapping with the second portion of the cavity of the finger-worn wearable ring device.

Id. As discussed above, the Accused Products satisfy each limitation of claim 1. Additionally, as will be explained by Dr. Sarrafzadeh, the battery and PCB in each of the Accused Products are located in non-overlapping portions of the cavity as required by claim 1. *See* CPB at 117-119; CX-0056; CX-0065. This can clearly be seen from the figures below. *See id.*



CX-0056; CX-0065.

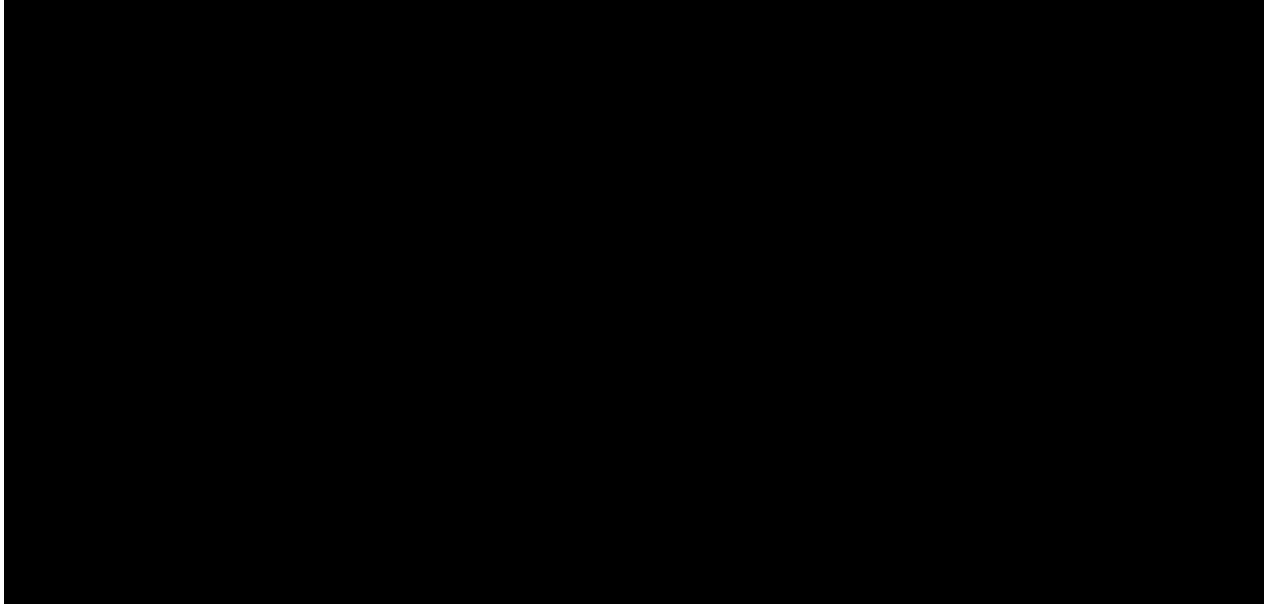
The Staff thus expects the evidence to show that the Accused Products infringe claim 2 of the '178 patent. *See id.*

3. Claim 12

Oura contends that the Accused Products satisfy the limitations of claim 12 of the '178 patent. *See* CPB at 120-125. Claim 12 depends from claim 1 and thus includes all the limitations of claim 1. *See* JX-0001 ('178 patent) at cl. 12. Claim 12 reads as follows:

Claim 12. The finger-worn wearable ring device of claim 1, wherein the battery comprises a curved battery, wherein an arc of the curved battery approximates a corresponding arc of the external housing component.

Id. As explained above, the Accused Products satisfy each limitation of claim 1. Additionally, the Accused Products include a curved battery that approximates a corresponding arc of the external housing component as required by claim 12. *See* CPB at 120-125; CX-0056; CX-0065. This can clearly be seen from the figures below. *See id.*



CX-0056; CX-0065. Respondents do not appear to contest that the Accused Products have curved batteries that approximate an arc of the external housing components. *See* RPB at 97 (RingConn); 134 (Ultrahuman). However, Respondents argue that they sell different sized rings and that Oura did not show that this limitation was met for each ring size. *See id.* Respondents' argument appears to be without merit. *See* CPB at 120-125; CX-0056; CX-0065. Dr. Sarrafzadeh is expected to testify that all of the Accused Products have curved batteries that approximate an arc of the external housing components. *See id.*

The Staff thus expects the evidence to show that the Accused Products infringe claim 12 of the '178 patent. *See id.*

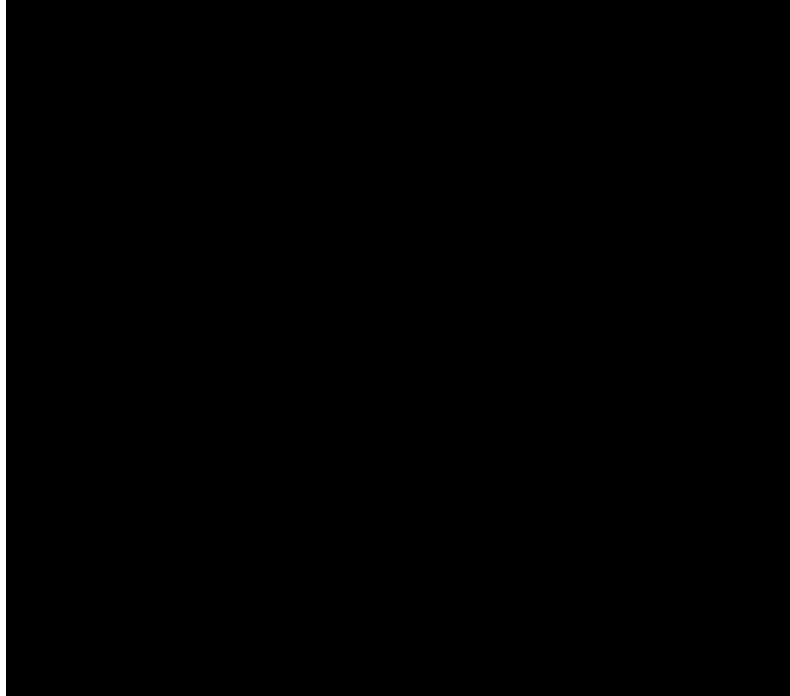
4. Claims 13 and 14

In this regard, Dr. Sarrafzadeh is expected to testify that the remaining limitations of claims 13 and 14 of the '178 patent are met by the Accused Products. *See* CPB at 127-130, 133-137. Respondents do not otherwise contest that the Accused Products satisfy the remaining limitations of claims 13 and 14 of the '178 patent. *See* RPB at 98, 134. The Staff thus expects the evidence to show that the Accused Products infringe claims 13 and 14 of the '178 patent. *See id.*

5. Claims 17 and 18

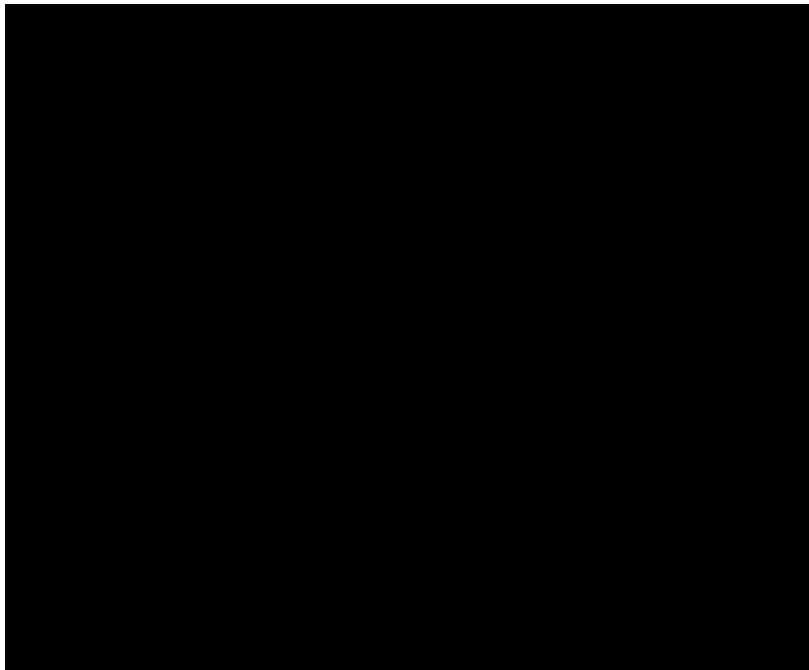
Oura contends that the Accused Products satisfy the limitations of claim 17 and 18 of the '178 patent.” *See* CPB at 139-142, 146-149. These claims, however, require “a first side wall and a second side wall that extend between the internal housing component and the external housing component” such that “the cavity is defined at least in part by the outer circumferential surface, the inner circumferential surface, the first side wall, and the second side wall.” *See* JX-0001 ('178 patent) at claims 17, 18. But as shown in the images below, the cavity formed in each of the Accused Products is at best defined in part by the inner and outer circumferential surfaces, but not by the first side wall and the second side wall, as the claim requires. *See* RPB at 98-99 (RingConn); 135-137 (Ultrahuman).

Ultrahuman Ring AIR: As shown in the figure below, the cavity of the accused Ultrahuman Ring AIR does not touch and is not defined by the side walls of the external housing component. *See* RPB at 135-137 (Ultrahuman); CX-0067.



CX-0067.

RingConn Smart Ring: Similarly, as shown in the figure below, the cavity of the accused RingConn Smart Ring does not touch and is not defined by the side walls of the external housing component. *See* RPB at 98-99 (RingConn); CX-0048.



CX-0048.

The Accused Products thus fail to satisfy each limitation of these two claims. *See id.* The Staff thus expects the evidence to show that the Accused Products do not infringe claims 17 and 18 of the '178 patent. *See* RPB at 98-99 (RingConn); 135-137 (Ultrahuman); CX-0048; CX-0067.

6. Conclusion

For the reasons set forth above, the Staff expects the evidence to show that the Accused Products satisfy each limitation of claims 1, 2, and 12-14 of the '178 patent, and thus infringe those claims. *See* CPB at 38-157.

C. Technical Prong

The Staff expects the evidence to show that the Oura DI Products satisfy each limitation of claims 1, 2, and 12-14 of the '178 patent. *See* CPB at 38-139. As with infringement, Oura relies upon the expert opinions of Dr. Sarrafzadeh, who is expected to testify that each limitation of those claims is satisfied by the DI Products. *See id.* at 38-155. The design and implementation of the Oura Ring Gen. 3 DI Product are substantially similar to the Accused Products. *See* CPB at 11-15. However, the Oura Ring Gen. 4 DI Product differs slightly in design in that it includes a metal internal housing component, as opposed to using potting material. *See id.* at 13. As will be discussed below, this changes the analysis slightly with respect to claims 17 and 18.

Conversely, Respondents contend that the DI Products do not practice claims 1, 2, 12-14, 17, and 18 for substantially the same reasons that they argue for noninfringement. *See* RPB at 137-168. The Staff is thus of the view that Respondents' arguments concerning claims 1, 2, and 12-14 should be rejected for the same reasons. *See* CPB at 38-139. Each asserted claim is addressed below.

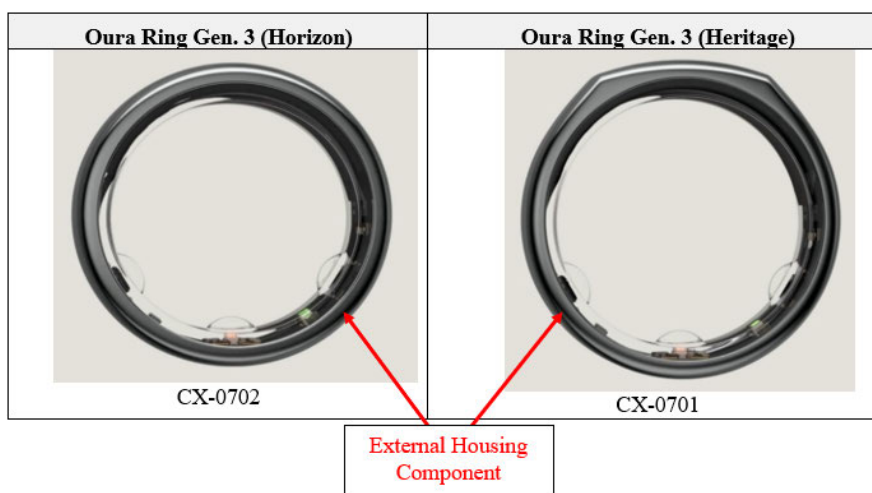
1. Claim 1

a) Limitation 1[pre]: “A finger-worn wearable ring device”

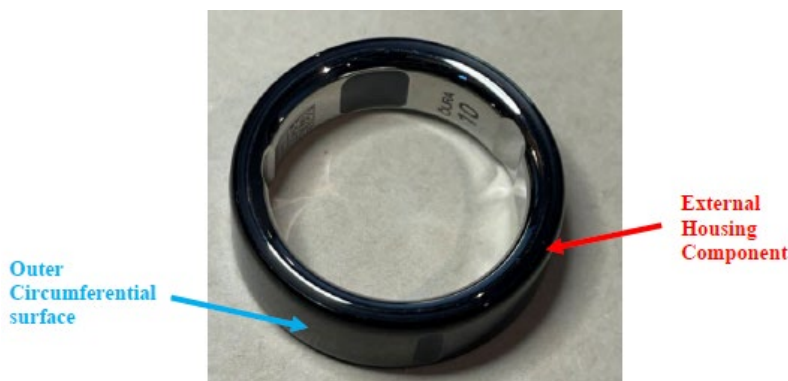
Oura contends that the DI Products satisfy limitation 1[pre] of the '178 patent, which recites “[a] finger-worn wearable ring device.” See CPB at 41-43. As will be explained by Dr. Sarrafzadeh, this limitation is clearly met by the DI Products. See *id.*; CX-0702; CX-0701; CX-0667. The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[pre] of the '178 patent. See *id.*

b) Limitation 1[a]: “an external housing component defining an outer circumferential surface of the finger-worn wearable ring device”

Oura contends that the DI Products satisfy limitation 1[a] of the '178 patent, which recites “an external housing component defining an outer circumferential surface of the finger-worn wearable ring device.” See CPB at 50-54. As will be explained by Dr. Sarrafzadeh and shown in the figures below, the Oura DI Products each have an external metallic housing structure that satisfies this limitation. See *id.*; CX-0701; CX-0702; CX-0048; CX-0699; CX-0668.



CX-0702; CX-0701.

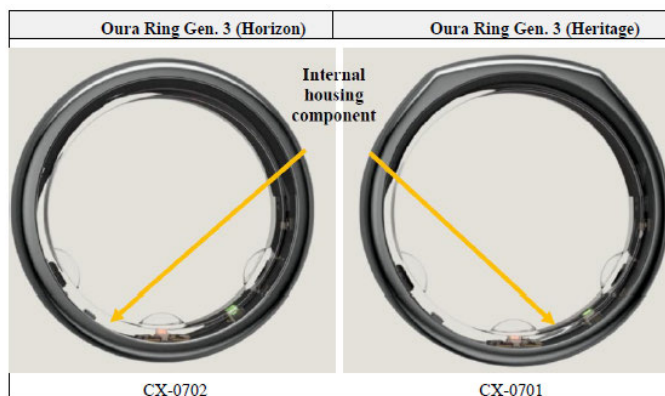


CX-0699.

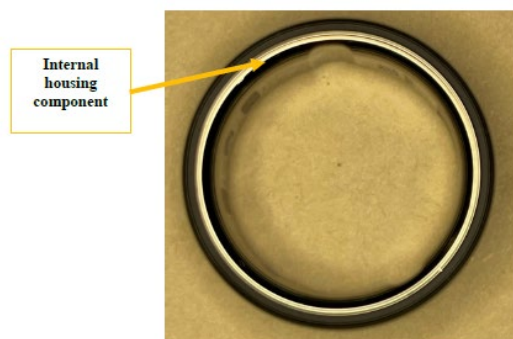
The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[a] of the '178 patent. *See* CPB at 50-54.

- c) *Limitation 1[b(i)]: “an internal housing component defining an inner circumferential surface of the finger-worn wearable ring device”*

Oura contends that the DI Products satisfy limitation 1[b(i)] of the '178 patent, which recites “an internal housing component defining an inner circumferential surface of the finger-worn wearable ring device.” *See* CPB at 64-69. As will be explained by Dr. Sarrafzadeh and shown in the figures below, the DI Products each have an internal housing structure that satisfies this limitation. *See id.*; CX-0702 (Gen. 3 Horizon); CX-0701 (Gen. 3 Heritage); CX-0668 (Gen. 4).



CX-0702; CX-0701.

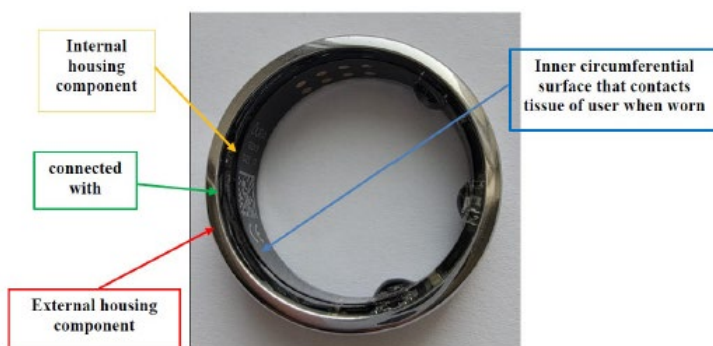


CX-0668 (Gen. 4).

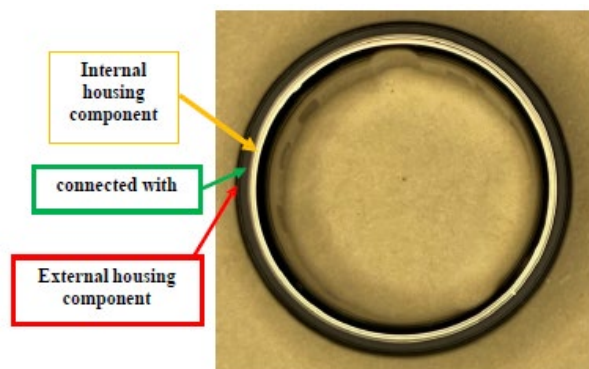
The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[b(i)] of the '178 patent. *See* CPB at 64-69.

d) Limitation 1[b(ii)]: “the internal housing component coupled with the external housing component”

Next, Oura contends that the DI Products satisfy limitation 1[b(ii)] of the '178 patent, which recites “the internal housing component coupled with the external housing component.” *See* CPB at 72-75. As will be explained by Dr. Sarrafzadeh and shown in the figures below, the DI Products each have an internal housing component that is coupled with the external housing component as required by this limitation. *See id.*; CX-0176 (Gen. 3); CX-0668 (Gen. 4).



CX-0176 (Gen. 3).

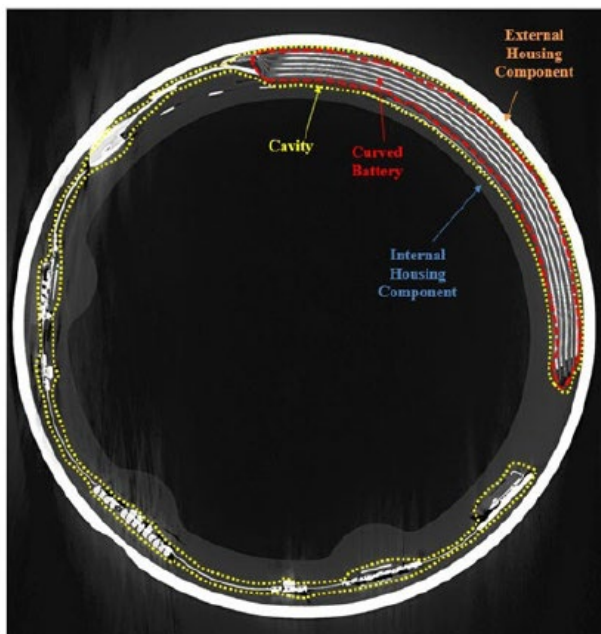


CX-0668 (Gen. 4).

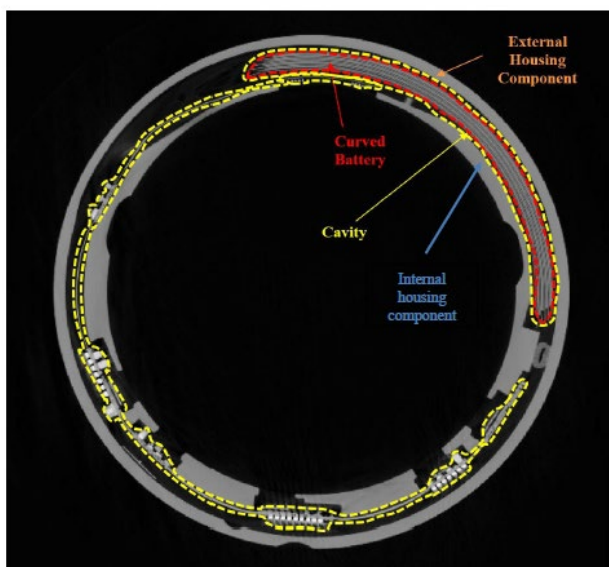
The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[b(ii)] of the '178 patent. *See* CPB at 72-75.

- e) *Limitation 1[c]: “a battery positioned within a cavity formed between the internal housing component and the external housing component, wherein the battery comprises a shape and size configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device”*

Oura contends that its DI Products satisfy limitation 1[c] of the '178 patent, which recites “a battery positioned within a cavity formed between the internal housing component and the external housing component, wherein the battery comprises a shape and size configured to fit within the cavity between the outer circumferential surface of the external housing component and the inner circumferential surface of the internal housing component, and wherein the battery extends through at least a first portion of the cavity of the finger-worn wearable ring device.” *See* CPB at 86-91. Oura relies upon the expert testimony of Dr. Sarrafzadeh, who is expected to testify that the DI Products have a battery positioned within a cavity formed between the internal housing components and the external housing components of those products as required by limitation 1[c] and shown in the CT images below. *See id.*; CX-0046; CX-0054; CX-0074C.



CX-0046 (Gen. 3); CX-0054 (Gen. 3).

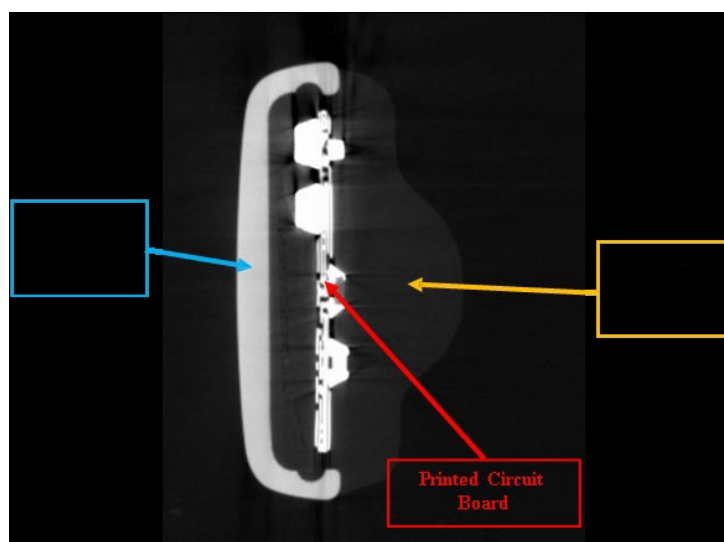


CX-0074C (Gen. 4).

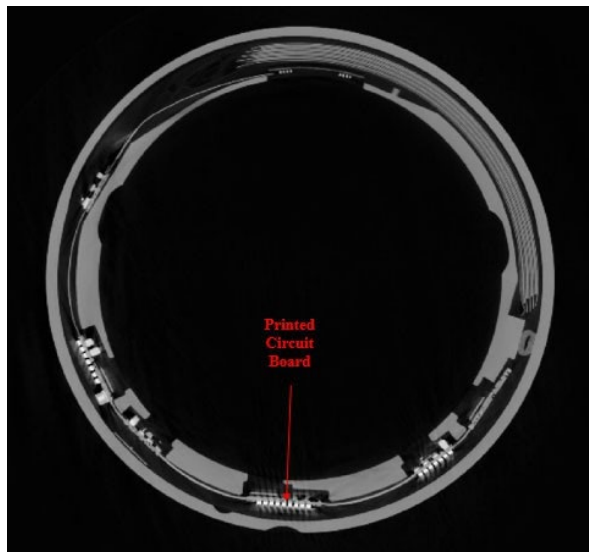
The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[c] of the '178 patent. *See* CPB at 86-91.

- f) *Limitation 1[d]: “a printed circuit board disposed between the internal housing component and the external housing component, wherein the printed circuit board extends through at least a second portion of the cavity of the finger-worn wearable ring device different from the first portion”*

Oura contends that the DI Products satisfy limitation 1[d] of the '178 patent. *See* CPB at 107-112. As will be explained by Dr. Sarrafzadeh and shown in the CT images below, the DI Products each have a printed circuit board disposed between the internal housing component and the external housing component that extends through at least a second portion of the cavity as required by this limitation. *See id.*; CX-0048; CX-0046; CX-0074C.



CX-0048 (Gen. 3).



CX-0074C (Gen. 4).

The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[d] of the '178 patent. *See* CPB at 107-112.

- g) *Limitation 1[e]: “one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component”*

Oura contends that the DI Products satisfy limitation 1[e] of the '178 patent, which recites “one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component.” *See* CPB at 115-117. Oura relies upon the expert testimony of Dr. Sarrafzadeh, who is expected to testify that the DI Products have “one or more sensors electrically coupled with the printed circuit board and the battery and configured to acquire data from the user through the internal housing component” as required by limitation 1[e]. *See id.*

The Staff thus expects the evidence to show that the DI Products satisfy limitation 1[e] of the '178 patent. *See id.*

h) Conclusion

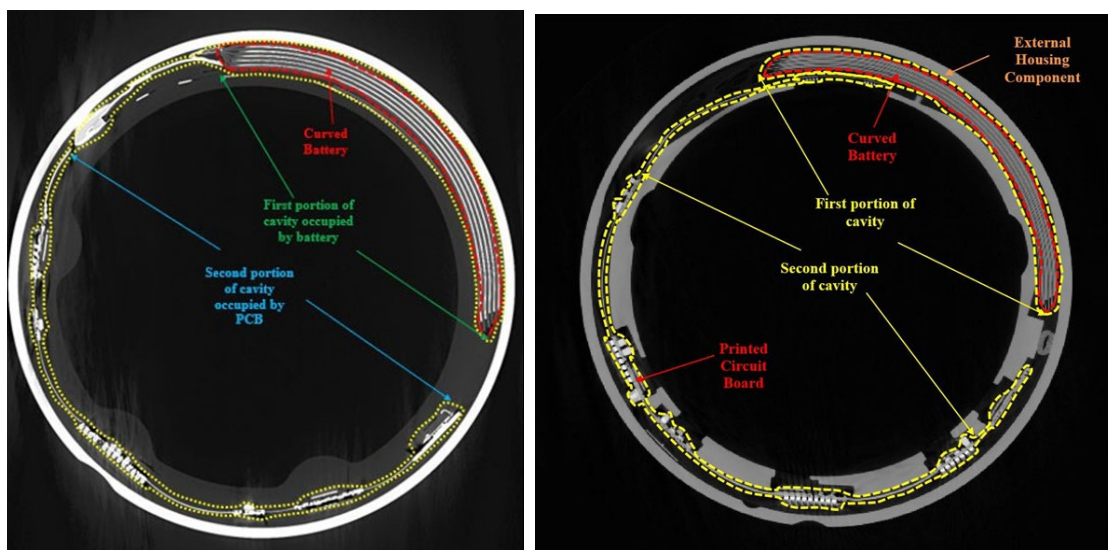
For the reasons set forth above, the Staff expects the evidence to show that the DI Products satisfy each limitation and thus practice claim 1 of the '178 patent. *See* CPB at 41-117.

2. Claim 2

Oura contends that the DI Products satisfy the limitations of claim 2 of the '178 patent. *See* CPB at 119-120. Claim 2 depends from claim 1 and thus includes all the limitations of claim 1. *See* JX-0001 ('178 patent) at cl. 2. Claim 2 reads as follows:

Claim 2. The finger-worn wearable ring device of claim 1, wherein the first portion of the cavity of the finger-worn wearable ring device is non-overlapping with the second portion of the cavity of the finger-worn wearable ring device.

Id. As discussed above, the DI Products satisfy each limitation of claim 1. Additionally, as will be explained by Dr. Sarrafzadeh and shown in the figures below, the battery and PCB in each of the DI Products are located in non-overlapping portions of the cavity as required by claim 1. *See* CPB at 119-120; CX-0046; CX-0065. This can clearly be seen from the figures below. *See id.*



CX-0046 (Gen. 3); CX-0074C (Gen. 4).

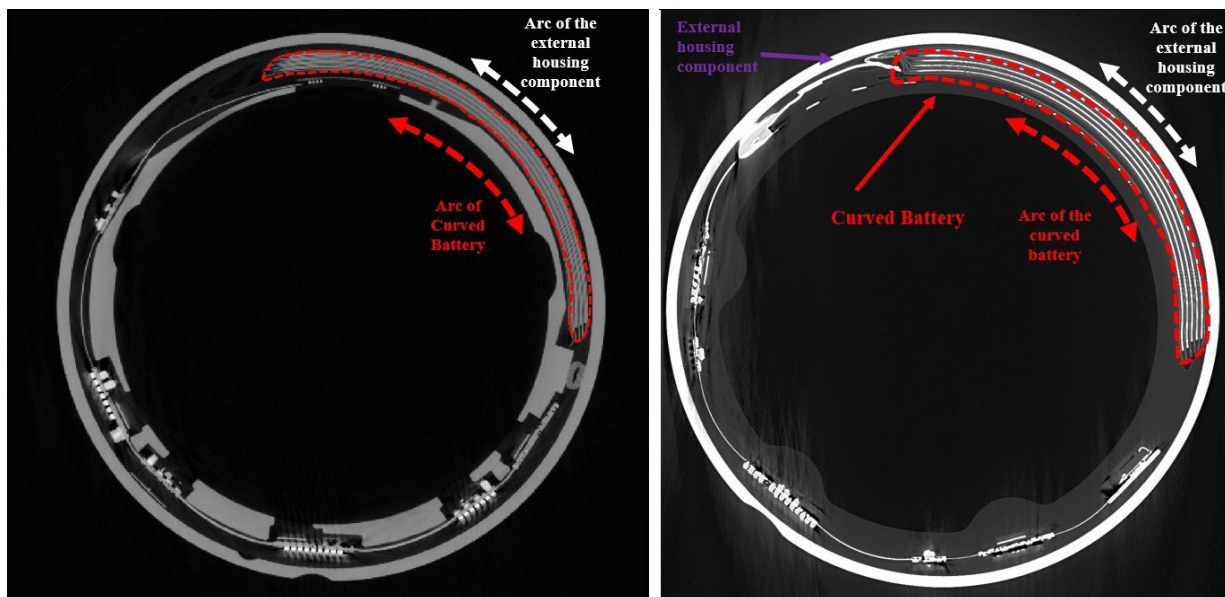
The Staff thus expects the evidence to show that the DI Products practice claim 2 of the '178 patent. *See id.*

3. Claim 12

Oura contends that the DI Products satisfy the limitations of claim 12 of the '178 patent. *See* CPB at 125-127. Claim 12 depends from claim 1 and thus includes all the limitations of claim 1. *See* JX-0001 ('178 patent) at cl. 12. Claim 12 reads as follows:

Claim 12. The finger-worn wearable ring device of claim 1, wherein the battery comprises a curved battery, wherein an arc of the curved battery approximates a corresponding arc of the external housing component.

Id. As explained above, the DI Products satisfy each limitation of claim 1. Additionally, the DI Products include a curved battery that approximates a corresponding arc of the external housing component as required by claim 12. *See* CPB at 125-127; CX-0046; CX-0074C. This can clearly be seen from the figures below. *See id.*



CX-0046 (Gen. 3); CX-0074C (Gen. 4).

The Staff thus expects the evidence to show that the DI Products practice claim 12 of the '178 patent. *See id.*

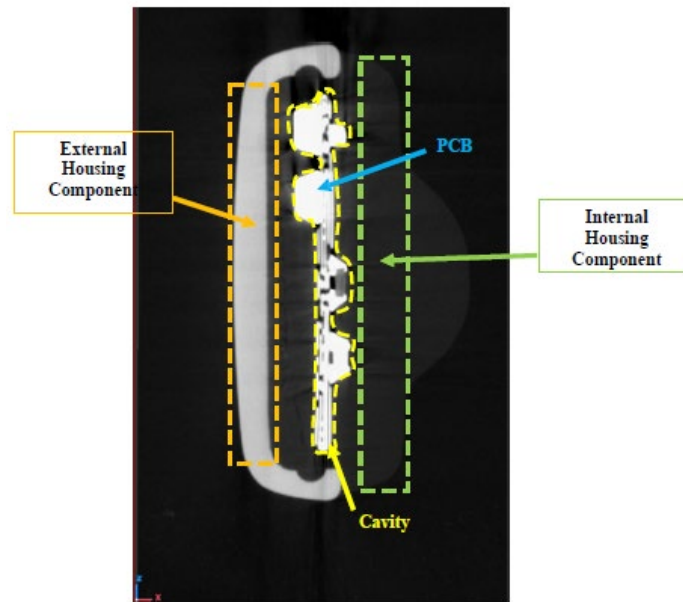
4. Claims 13 and 14

In this regard, Dr. Sarrafzadeh is expected to testify that the remaining limitations of claims 13 and 14 of the '178 patent are met by the DI Products. *See CPB at 131-133, 137-139.* Respondents do not otherwise contest that the DI Products satisfy the remaining limitations of claims 13 and 14 of the '178 patent. *See RPB at 166.* The Staff thus expects the evidence to show that the DI Products practice claims 13 and 14 of the '178 patent. *See id.*

5. Claims 17 and 18

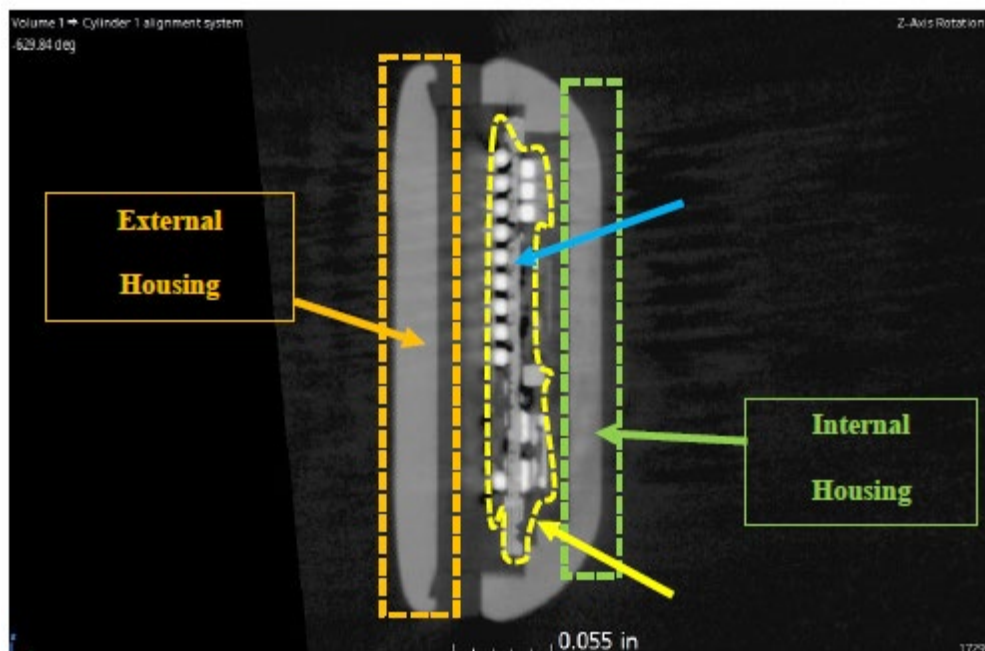
Finally, Oura contends that the DI Products satisfy the limitations of claim 17 and 18 of the '178 patent. *See CPB at 142-146, 149-150, 153-155.* As discussed above, these claims require “a first side wall and a second side wall that extend between the internal housing component and the external housing component” such that “the cavity is defined at least in part by the outer circumferential surface, the inner circumferential surface, the first side wall, and the second side wall.” *See JX-0001 ('178 patent) at claims 17, 18.*

In the Staff's view, the evidence will show that the Oura Ring Gen. 3 DI product does not practice claims 17 and 18 of the '178 patent for substantially the same reasons that the Accused Products do not infringe those claims. Specifically, the cavity of the Oura Ring Gen. 3 product is not defined by the first side wall and the second side wall, as the claim requires. *See RPB at 166-167.* As shown in the CT image below, the cavity of the accused Oura Ring Gen. 3 does not touch and is not defined by the side walls of the external housing component. *See RPB at 166-167; CX-0048.*



CX-0048 (Gen. 3). Accordingly, this DI product fails to satisfy the limitations of claims 17 and 18 of the '178 patent. *See id.*

The analysis for the Oura Ring Gen. 4 product, however, differs from that of the Oura Ring Gen. 3 product. The Gen. 4 product has a cavity that is defined at least in part by the outer circumferential surface, the inner circumferential surface, the first side wall, and the second side wall as the claim requires. *See CPB at 144-146.* However, as shown in the CT image below, the walls of the Gen. 4 product do not extend between the internal and external housing components as the claim requires. *See CX-0076C.*



CX-0076C. Instead, resin fills the gap between the housing walls and the other housing component. *See id.* Accordingly, the Ora Ring Gen. 4 product fails to satisfy each limitation of claims 17 and 18.

The Staff thus expects the evidence to show that the DI Products do not satisfy claims 17 and 18 of the '178 patent.

6. Conclusion

For the reasons set forth above, the Staff expects the evidence to show that the DI Products practice claims 1, 2, and 12-14 of the '178 patent. *See* CPB at 41-155.

D. Validity

Respondents contend that Ora is precluded from relitigating the validity of the asserted claims and that all asserted claims of the '178 patent are invalid anticipated and/or rendered obvious by certain prior art. RPB at 168-417. The patent at issue is presumed to be valid. *See* 35 U.S.C. § 282. Although Complainant has the burden of proving a violation of Section 337, it can rely upon the presumption of validity, which Respondents must overcome by clear and

convincing evidence. *See, e.g., Checkpoint Sys., Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 671 (Fed. Cir. 1995). For the reasons set forth below, the Staff does not expect clear and convincing evidence to show that any asserted claim of the ’178 patent is invalid.

1. Issue Preclusion

Oura filed statutory disclaimers in certain patents related to the asserted ’178 patent to avoid institution of *inter partes* and post grant reviews before the Patent Trial and Appeal Board. *See* RPB at 168-174. Based on these statutory disclaimers, Respondents contend that Oura is precluded from relitigating the validity of the asserted claims of the ’178 patent under the doctrine of issue preclusion, which is also referred to as collateral estoppel. *See id.* But as discussed below, Respondents fail to set forth any legal or factual basis that would support such preclusion.

The Federal Circuit and the Commission each look to the Restatement (Second) of the Law of Judgments (1982) (“Restatement”) for the definitions and guidelines for the effects of a former adjudication and preclusion. *See Young Engineers, Inc. v. U.S. International Trade Commission*, 721 F.2d 1305, 1314 (Fed. Cir. 1983) (“*Young Engineers*”); *Certain Three-Dimensional Cinema Systems and Components Thereof*, 337-TA-939, Comm’n Op. at 53 (Jul. 21, 2016). The Restatement states the general rule of issue preclusion as follows:

When an issue of fact or law is actually litigated and determined by a valid and final judgment, and the determination is essential to the judgment, the determination is conclusive in a subsequent action between the parties, whether on the same or a different claim.

Restatement § 27. The party seeking to apply issue preclusion based on a prior action bears the burden of establishing that the requirements for its application are met. *See United Access Techs., LLC v. Centurytel Broadband Servs. LLC*, 778 F.3d 1327, 1331 (Fed. Cir. 2015); *see also Young Engineers*, 721 F.2d at 1316.

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The Commission has found that the doctrine of issue preclusion applies if: “(1) the issue decided in the prior litigation is identical to that before the tribunal; (2) the issue was actually litigated in the prior proceeding; (3) the resolution of the issue in the prior litigation was necessary to its resulting judgment; and (4) the party against whom estoppel is asserted had a full and fair opportunity to litigate its position.” *Certain Digital Set-Top Boxes and Components Thereof*, Inv. No. 337-TA-712, USITC Pub. No. 4332 (June 2012), Comm’n Op. at 5 (Sept. 23, 2011); Restatement § 27.

With respect to patent claims and the “identical issue” requirement, the Federal Circuit has held that the patent claim language does not need to be identical; rather, the “issue” is identical where there is no material difference to the invalidity or infringement issue decided in the first action.

Our precedent does not limit collateral estoppel to patent claims that are identical. Rather, it is the identity of the issues that were litigated that determines whether collateral estoppel should apply. [citations omitted] If the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies.

Ohio Willow Wood Co. v. Alps S., LLC, 735 F.3d 1333, 1342 (Fed. Cir. 2013).

Respondents cannot meet their burden under the legal standard set forth above to show that issue preclusion should apply.

First, Respondents fail to identify any final judgement that could give rise to issue preclusion. *See* RPB at 168-174. In this regard, Respondents rely upon *inter partes* review and post grant review proceedings before the U.S. Patent & Trademark Office (“USPTO”) Patent Trial and Appeal Board (“PTAB”). *See id.* On May 31, 2024, Samsung filed, *inter alia*, the following petitions:

- (i) a petition for post-grant review of U.S. Patent No. 11,868,178 (Case No. PGR2024-00030);

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- (ii) a petition for post-grant review of U.S. Patent No. 11,868,179 (“the ’179 patent”) (Case No. PGR2024-00031);
- (iii) a petition for *inter partes* review of U.S. Patent No. 10,893,833 (“the ’833 patent”) (Case No. IPR2024-00929); and
- (iv) a petition for *inter partes* review of U.S. Patent No. 11,599,147 (“the ’147 patent”) (Case No. IPR2024-00930).

See RPB at 168-169; RX-0444 (PRG2024-00030); RX-0437 (PGR2024-00031); RX-0441 (IPR2024-00929); RX-0433 (IPR2024-0930). These proceedings, however, are ongoing. As of this date, the PTAB has not made any findings regarding the validity of the challenged claims before it. Indeed, the PTAB has not even determined whether to institute any proceedings based on Samsung’s petitions. Oura has elected to focus its resources before the PTAB on the ’178 patent by filing statutory disclaimers as to the challenged claims of the other patents so as to moot the issues raised by Samsung with respect to U.S. Patent No. 11,868,179; U.S. Patent No. 10,893,833; and U.S. Patent No. 11,599,147. See RPB at 168-169; 37 C.F.R. § 42.107(e) (“No *inter partes* review will be instituted based on disclaimed claims.”); 37 C.F.R. § 42.207(e) (“No post-grant review will be instituted based on disclaimed claims.”). And as the Federal Circuit has noted, “[d]isclaimed claims are treated as if they never existed...and disclaimer does not legally constitute ‘an admission that the subject matter of the disclaimer appears in the prior art.’” See *Raytheon Techs. Corp. v. General Electric Co.*, 993 F.3d 1374, 1379, n.4 (Fed. Cir. 2021), citing *Sanofi-Aventis U.S., LLC v. Dr. Reddy’s Laboratories, Inc.*, 933 F.3d 1367, 1373 (Fed. Cir. 2019) and *National Fruit Products Co. v. C.H. Musselman Co.*, 8 F.Supp. 994, 995 (M.D. Pa. 1934). Accordingly, Samsung’s petitions for *inter partes* review of the ’883 patent and the ’147 patent and its petition for post grant review of the ’179 patent will presumably be denied pursuant to 37 C.F.R §§ 42.107(e) and 42.207(e). In the absence of a final judgment, as is the case here, there can be no preclusion. *Certain Digital Set-Top Boxes and Components*

Thereof, Inv. No. 337-TA-712, USITC Pub. No. 4332 (June 2012), Comm’n Op. at 5 (Sept. 23, 2011); Restatement § 27. The validity issues raised by Samsung’s petitions have not been decided by the PTAB, and thus those proceedings cannot give rise to issue preclusion. For this reason alone, issue preclusion does not apply.

And even if the PTAB had issued a decision on validity, which it has not, issue preclusion would still not apply because the question of validity that could theoretically be decided by the USPTO is not identical to the validity issue now before the Commission – a challenger’s burden on validity before the PTAB is lower than Respondents’ burden on validity before the Commission. *See Certain Three-Dimensional Cinema Systems and Components Thereof*, Inv. No. 337-TA-939, Comm’n Op. at 54 (Jul. 21, 2016) (“The Restatement explains that: ‘Since the process by which the issue was adjudicated cannot be reconstructed on the basis of a new and different burden, preclusive effective is properly denied.’”).¹ For this additional reason, Respondents cannot meet their burden as to issue preclusion.

Furthermore, to show that the validity issues that are now before the Commission are identical to those allegedly decided by the PTAB, Respondents must show that the differences between the asserted claims of the ’178 patent and the challenged claims of the ’147 patent, the ’833 patent, and the ’179 patent do not materially alter the question of validity. *See Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1342 (Fed. Cir. 2013). Respondents, however, have not performed the required analysis. *See RPB* at 168-174.

¹ *See* Jones Day PTAB Litigation Blog, ITC: No Issue Preclusion Where Asserted Claims are Found Unpatentable in IPR, <https://www.ptablitigationblog.com/itc-no-issue-preclusion-where-asserted-patent-found-unpatentable-in-ipr/> (last visited Nov. 21, 2024).

The Staff thus submits that Respondents will fail to meet their burden. Accordingly, Oura is not precluded from litigation the validity of the asserted claims of the '178 patent.

2. Anticipation

As discussed above, a determination of whether a prior art reference anticipates a claim under 35 U.S.C. § 102 is a two-step inquiry: the first step is the proper construction of the claims, and the second step is the comparison of the properly construed claims to the prior art. *See, e.g., Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003). “Anticipation requires the presence in a single prior art disclosure of all of the elements of a claimed invention arranged as in the claim.’ The requirement that the prior art elements themselves be ‘arranged as in the claim’ means that claims cannot be ‘treated . . . as mere catalogs of separate parts, in disregard of the part-to-part relationships set forth in the claims and that give the claims their meaning.’” *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010) (citation omitted). However, the disclosure of the prior art reference may be inherent rather than express – “if the prior art necessarily functions in accordance with, or includes, the claim’s limitations, it anticipates.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1376 (Fed. Cir. 2005) (internal quotation marks omitted). Anticipation is a question of fact. *Finisar Corp. v. The DirecTV Group, Inc.*, 523 F.3d 1323, 1334 (Fed. Cir.), *cert. denied*, 129 S. Ct. 754 (2008).

Respondents’ precise contentions are unclear because they do not separately brief anticipation and obviousness. *See* RPB at 178-417. Respondents, however, appear to rely upon the following alleged prior art references for purposes of anticipation:

Exhibit	Reference	Effective Date
CX-1137 ²	U.S. Patent Publication No. 2009/0054751 (“Babashan”)	Feb. 26, 2009

² To consolidate duplicative exhibits as required by G.R. 12.2.2, the parties agreed to use the designation of the first occurrence of a duplicate exhibit in Oura’s exhibit list, if present, and to otherwise use the designation of the first occurrence of a duplicate exhibit in Respondents’

Exhibit	Reference	Effective Date
CX-1133 ³	U.S. Patent Publication No. 2012/0016245 (“Niwa”)	Jan. 19, 2012
RX-0018	U.S. Patent No. 10,303,867 (“Schröder”)	Jul. 25, 2013 ⁴
CX-1141	U.S. Patent Publication No. 2012/0218184 (“Wissmar”)	Aug. 30, 2012

See RPB at 237-400.

Respondents appear to contend that certain claims of the ’178 patent are invalid as anticipated by the above-identified references as follows: (i) claims 1, 2, 17, and 18 are allegedly anticipated by Babashan (CX-1137); (ii) claims 1, 2, 13, 14, 17, and 18 are allegedly anticipated by Niwa (CX-1133); (iii) claims 1, 2, 17, and 18 are allegedly anticipated by Schröder (RX-0018); and (iv) claims 1 and 2 are allegedly anticipated by Wissmar (CX-1141). See RPB at 237-400. But as explained below with respect to obviousness, none of these references discloses each limitation of any asserted claim of the ’178 patent. See CPB at 169-209. Accordingly, the Staff does not expect Respondents to meet their burden of showing anticipation by clear and convincing evidence. See *id.*

3. Obviousness

With respect to obviousness, the key question for purposes of determining whether claims are invalid is whether “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time

exhibit list. Here, Respondents mistakenly cite to CX-0179 (teardown image of accused products) and RX-0014 (duplicate of Babashan) instead of CX-1137 (Babashan), as agreed.

³ Respondents mistakenly cite to RX-0015 (duplicate of Niwa) and RX-0019 (different Niwa reference) instead of CX-1133, as agreed.

⁴ Schröder issued from the National Stage of an International PCT application filed on June 18, 2014. See RX-0018. Respondents claim an earlier effective date based on a prior German patent application (RX-0025). See RPB at 197. That exhibit, however, is in German and fails to include a translation “as part of the foreign language exhibit” as required by Ground Rule 12.1.6. See Order No. 2 (Apr. 17, 2024).

the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103(a). This analysis hinges on the four Graham factors – (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *see also, e.g., Scanner Technologies Corp. v. ICOS Vision Sys. Corp.*, 528 F.3d 1365, 1379-80 (Fed. Cir. 2008). The ultimate conclusion as to whether the claimed invention is obvious is a question of law based on these underlying facts. *See, e.g., Pharmastem Therapeutics, Inc. v. Viacell, Inc.*, 491 F.3d 1342, 1359 (Fed. Cir. 2007), cert. denied, 552 U.S. 1258 (2008).

The U.S. Supreme Court has explained that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). Thus, “[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.” *Id.* at 419. Nevertheless, the analysis must still identify “an apparent reason to combine known elements in the fashion claimed by the patent at issue.” *Id.* at 418.

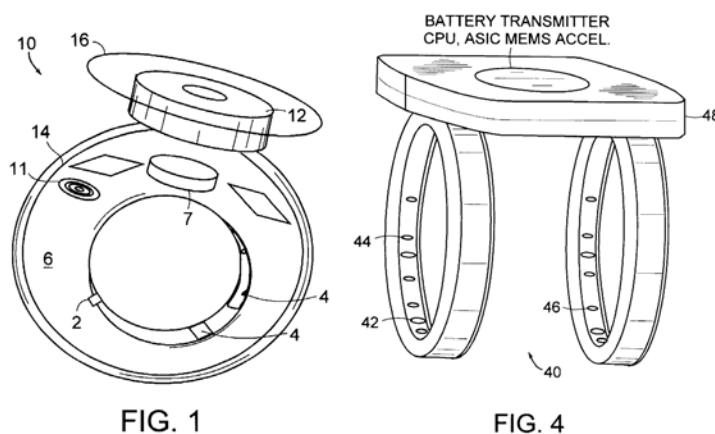
For purposes of their allegations of invalidity under 35 U.S.C. § 103, Respondents rely upon the following references in addition to the four references identified above with regard to anticipation: (i) U.S. Patent No. 5,964,701 (“Asada”) (CX-1134); (ii) U.S. Patent No. 8,715,204 (“Webster”) (CX-1135); (iii) U.S. Patent Publication No. 2013/0226486 (“Henderson”) (RX-0012); (iv) U.S. Patent No. 8,954,135 (“Yuen”) (CX-1136); (v) U.S. Patent Publication No. 2015/0116125 (“Armstrong”) (RX-0262); and (vi) Boo-Ho Yang, *Development of the Ring Sensor for Healthcare Automation*, Robotics and Autonomous Systems 30 (200) 273-281, 1999

(“Yang”) (CX-1121). *See* RPB at 156. For the reasons set forth below, it does not appear to the Staff that the references relied upon by Respondents, either alone or in combination, render invalid as obvious any claim of the ’178 patent.

a) Scope and Content of Prior Art

(1) U.S. Patent No. 5,964,701 (“Asada”)

U.S. Patent No. 5,964,701 (“Asada”) (CX-1134) discloses a ring sensor “for monitoring the health status of a patient.” *See* CX-1134 (Asada) at Abstract. Asada discloses two embodiments of a patent monitoring ring sensor as shown in Figs. 1 and 4:



CX-1134 (Asada) at Figs. 1, 4.

Fig. 1 of Asada provides a conceptual drawing of a first embodiment, showing light-emitting diodes 4 and photo diodes 2, along with an accelerometer 7, a radio transmitter 11, a circuit board 6, a battery 12, and orthogonal antennas 16 and 14. *See id.* at 3:28-47 4:24-38. However, neither Fig. 1 nor the corresponding disclosure describe the housing or show how the various components would fit together. *See id.* Fig. 4 shows a dual ring finger sensor, with a sensor module 48 affixed to the top of two rings. *See id.* at Fig. 4. According to Asada, “[t]he signal processing electronics, transmitter, antenna, battery, and MEMs accelerometer are

contained within sensor module 48 in a manner described with reference to FIG. 1.” *Id.* at 4:55-58.

Asada, however, does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the ’178 patent. *See* CPB at 158-169.

Moreover, Asada was considered by the Examiner during prosecution of the ’178 patent, and the asserted claims were found to be patentable. *See* JX-0001 (’178 patent). Accordingly, Respondents’ burden of proving invalidity is “especially difficult.” *See Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006) (“As a preliminary matter, we note that the [prior art] patent was before the Examiner during prosecution, which makes [the challenger’s] burden of proving invalidity at trial ‘especially difficult.’”), *citing Glaxo Group Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed.Cir. 2004).

(2) U.S. Patent No. 8,715,204 (“Webster”)

U.S. Patent No. 8,715,204 (“Webster”) (RX-0011) discloses a wireless vaginal sensor probe for use in monitoring and recording basal temperature while reducing inconvenience and discomfort. *See* RX-0011 (Webster) at 1:13-15, 33-36. Figure 5 of Webster shows an elastic vaginal ring according to one embodiment of the disclosed invention.

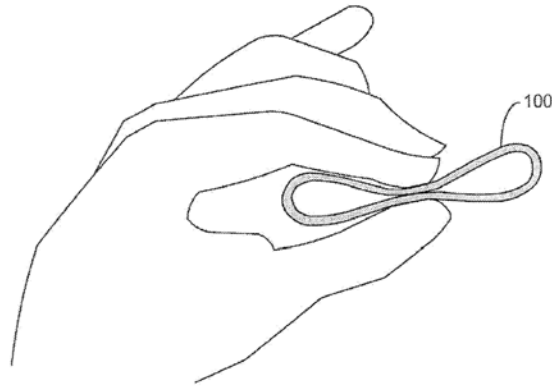


FIG. 5

RX-0011 (Webster) at Fig. 5. Respondents rely upon Webster for its disclosure of a flexible “thin-film lithium ion or zinc-manganese dioxide chemistry battery chemistry that can be bent or curved.” *See* RPB at 181-183; RX-0011 (Webster) at 5:8-12. As Webster explains, the vaginal ring 100 includes a flexible circuit board arrangement 102 that includes a battery 212. *See* RX-0011 (Webster) at 3:45-58. The following figures show both a top view (Fig. 2A) and a bottom view (Fig. 2B) of the flexible circuit board arrangement 102, which includes the battery 212.

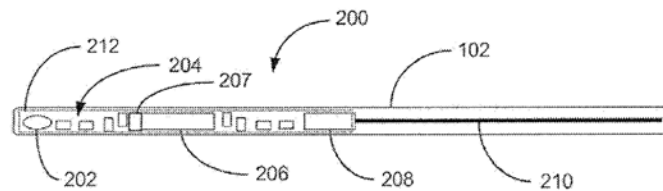


FIG. 2A

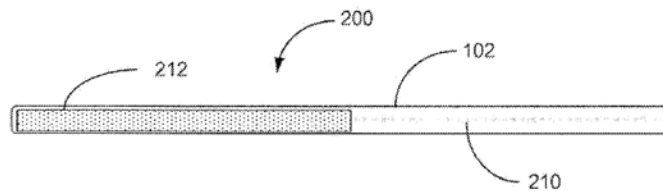
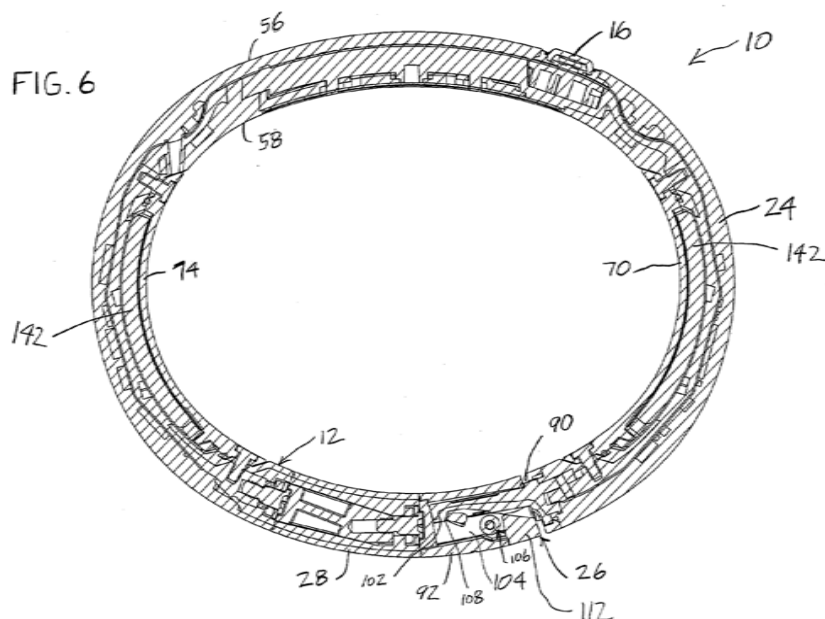


FIG. 2B

RX-0011 (Webster) at Figs. 2A and 2B. As explained by Webster, the transmitter assembly 200, which includes the flexible printed circuit board arrangement 102 with a battery 212, can be curled into a ring shape and encapsulated in an elastic polymer to form the elastic vaginal ring 100. *See id.* at 6:48-55. Respondents argue that Webster teaches a battery that can be positioned in a different portion of the device than the printed circuit board. *See* RPB at 181-182, *citing* RX-0011 (Webster) at 5:8-12. But to the contrary, Webster describes a battery 212 placed directly on the circuit board 102. Webster thus fails to support Respondents' arguments.

(3) U.S. Patent Publication No. 2013/0226486 ("Henderson")

U.S. Patent Publication No. 2013/0226486 ("Henderson") (CX-1139) is generally directed to battery and power management in activity monitoring devices "that can be worn in a variety of locations on a user's body including on a user's chest (e.g., a chest strap), around a user's wrist, around a user's arm, on a user's head, on a user's ankle or thigh, and the like." *See* CX-1139 (Henderson) at [0002], [0045]. The following figure shows a wrist-worn activity monitoring device having two batteries 142:



CX-1139 (Henderson) at Fig. 6, [0018], [0077]. Henderson explains that “the batteries 142 have a curvilinear or curved configuration and are generally rigid members.” *Id.* at [0077]. The batteries 142 “may be produced using a cold forming process where the battery is dynamically fed through a roller/conveyor system and formed over a wheel/mandrel to provide the curved shape.” *Id.* at [0125]. Respondents rely upon Henderson for its disclosure regarding the configuration and placement of batteries 142 as follows: (i) in combination with Asada for limitation 1[c]; (ii) in combination with Babashan for claims 2 and 12; and (iii) in combination with Niwa, Schröder, or Wissmar for claim 12. *See* RPB at 168-400, 217-225, 260-267, 309-317, 344-350, 384-391.

Henderson, however, was considered by the Examiner during prosecution of the ’178 patent, and the asserted claims were found to be patentable. *See* JX-0001 (’178 patent). Accordingly, Respondents’ burden of proving invalidity is “especially difficult.” *See Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006) (“As a preliminary matter, we note that the [prior art] patent was before the Examiner during prosecution, which makes [the challenger’s] burden of proving invalidity at trial ‘especially difficult.’”), *citing Glaxo Group Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed.Cir. 2004).

(4) U.S. Patent No. 8,954,135 (“Yuen”)

U.S. Patent No. 8,954,135 (“Yuen”) (CX-1136) is generally directed to a portable biometric monitoring device that is secured to an appendage of a user through a band. *See* CX-1136 (Yuen) at 1:18-27, 2:7-17. Fig. 3, reproduced below, shows the “skin facing portion” of the portable biometric monitoring device.

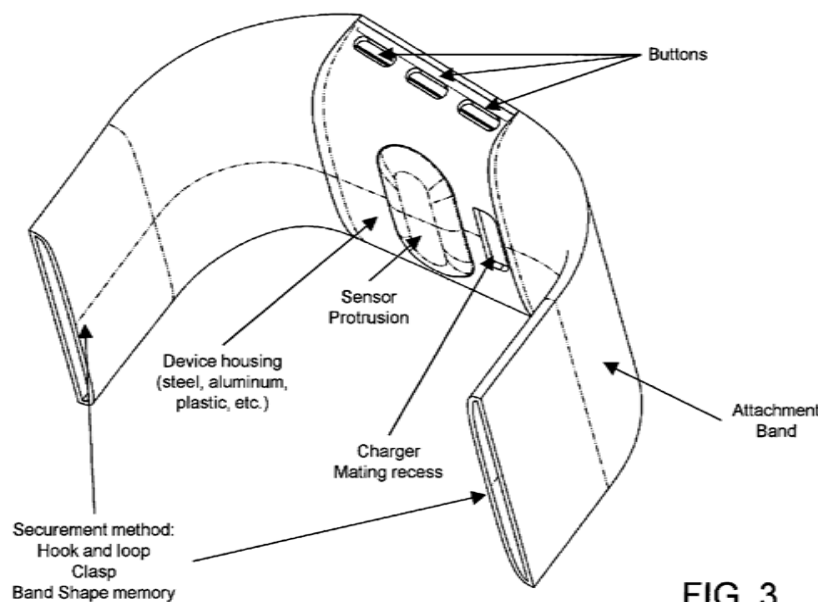


FIG. 3

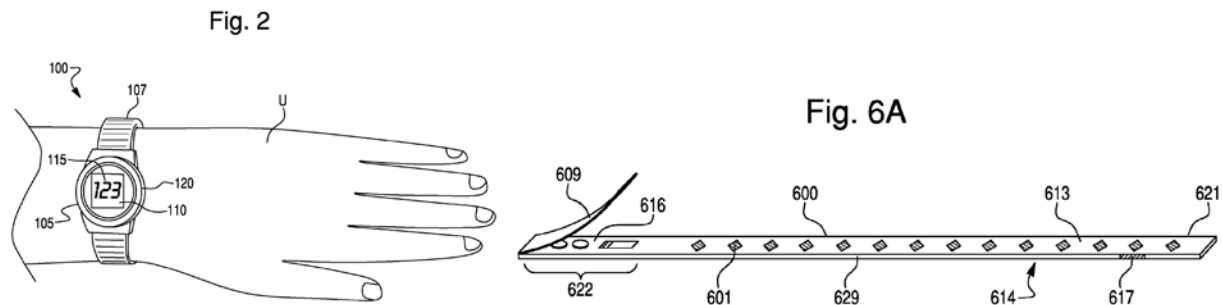
See CX-1136 (Yuen) at Fig. 3. The device includes a “sensor protrusion” that may include, for example, LED light sources and photodetectors to enable photoplethysmography (PPG) sensing. See *id.* at 2:18-25, 29-34. Respondents rely upon Yuen for its disclosure of LED light sources and photodetectors in combination with Wissmar for claims 13 and 14. See RPB at 392-395.

Yuen, however, was considered by the Examiner during prosecution of the ’178 patent, and the asserted claims were found to be patentable. See JX-0001 (’178 patent). Accordingly, Respondents’ burden of proving invalidity is “especially difficult.” See *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006) (“As a preliminary matter, we note that the [prior art] patent was before the Examiner during prosecution, which makes [the challenger’s] burden of proving invalidity at trial ‘especially difficult.’”), citing *Glaxo Group Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed.Cir. 2004).

(5) U.S. Patent Publication No. 2009/0054751 (“Babashan”)

U.S. Patent Publication No. 2009/0054751 (“Babashan”) (CX-1137) is generally directed to “[a] device for monitoring heart rate and blood oxygen levels using improved pulse oximetry

sensors.” CX-1137 (Babashan) at Abstract. Babashan describes various wrist-worn heart rate monitoring devices, including the following:



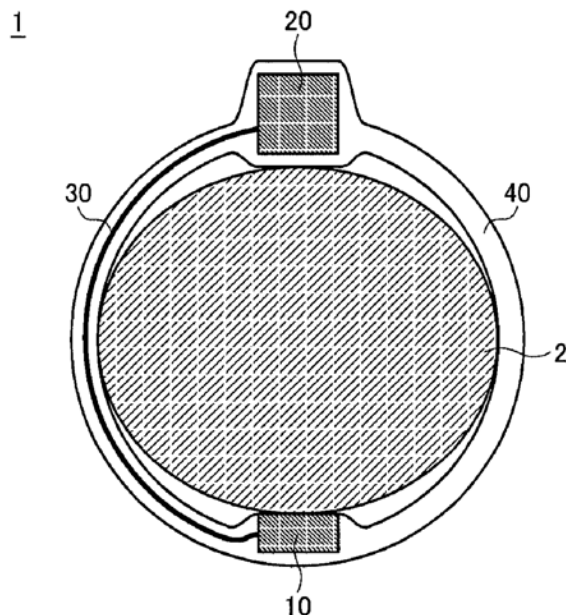
CX-1137 (Babashan) at Figs. 2, 6A; [0073] (“Figs. 6A illustrates the top view of an exemplary embodiment of a portable heart rate monitor 600 which can be worn on the wrist as a bracelet.”). Although these embodiments are wrist-worn devices, Babashan states that the disclosed heart rate monitor “may be designed to be worn on different body parts, such as wrists, fingers, ears, neck, chest or ankles.” *See id.* at [0086]. Finally, the embodiment shown in Figs. 6A-6I may include a battery compartment 602 that is covered by a lid 602A to secure the battery. *Id.* at [0085].

Babashan, however, does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], and 1[d] of the ’178 patent. *See* CPB at 169-177.

(6) U.S. Patent Publication No. 2012/0016245 (“Niwa”)

U.S. Patent Publication No. 2012/0016245 (“Niwa”) (CX-1133) is generally directed to a plethysmogram sensor, which includes a pair of light emitting diodes and a photo detector for purposes of measuring pulse, oxygen saturation, and the like. *See* CX-1133 at Abstract, [0001]-

[0008], [0117]. In one embodiment, shown in Fig. 22 below, Niwa discloses the described plethysmogram sensor contained in a ring. *See id.* at Fig. 22, [0191].

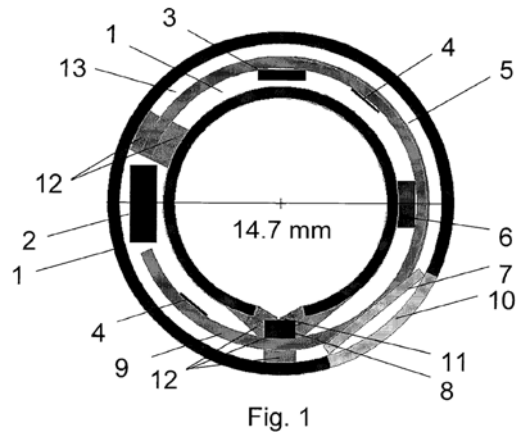


CX-1133 (Niwa) at Fig. 22.

Niwa, however, does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the '178 patent. *See* CPB at 177-184.

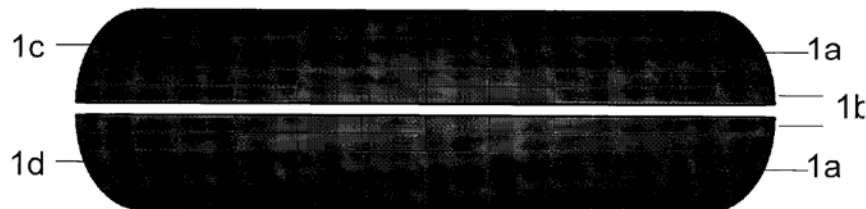
(7) U.S. Patent Publication No. 2012/0218184 (“Wissmar”)

U.S. Patent Publication No. 2012/0218184 (“Wissmar”) (CX-1141) generally discloses a toroidal finger ring, such as that shown in the figure below, with sensors and wireless communication technology. *See* CX-1141 (Wissmar) at [0001].



CX-1141 (Wissmar) at Fig. 4.

According to Wissmar, the disclosed ring is fabricated as top and bottom structures that then welded together to form a metal toroid as shown below in Fig. 9. *See* CX-1141 (Wissmar) at Fig. 9; [0085].



CX-1141 (Wissmar) at Fig. 9. Although Wissmar discloses a housing formed of two housing components that are welded together, those components form the top and bottom portions of the ring when viewed horizontally, as opposed to the internal and external portions, as the claim requires. *See id.*

As explained by Oura, Wissmar does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between

the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the '178 patent. *See* CPB at 196-209.

Moreover, Wissmar was considered by the Examiner during prosecution of the '178 patent, and the asserted claims were found to be patentable. *See* JX-0001 ('178 patent). Accordingly, Respondents' burden of proving invalidity is "especially difficult." *See Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006) ("As a preliminary matter, we note that the [prior art] patent was before the Examiner during prosecution, which makes [the challenger's] burden of proving invalidity at trial 'especially difficult.'"), *citing Glaxo Group Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed.Cir. 2004).

(8) U.S. Patent Publication No. 2005/0116125 ("Armstrong")

U.S. Patent Publication No. 2005/0116125 ("Armstrong") (RX-0262) is generally directed to a wearable wristband that is coupled to a wrist biosensor and a finger biosensor for the purpose of monitoring the activity of a user. *See* RX-0262 (Armstrong) at [0002].

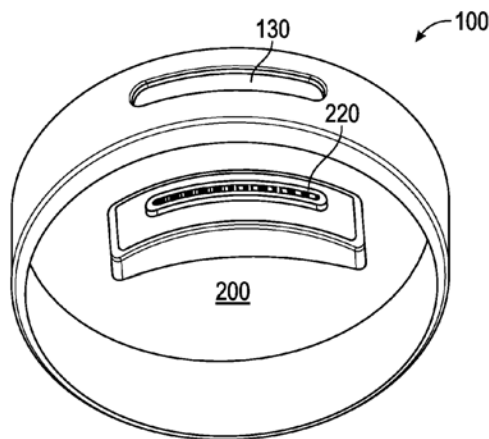


FIG. 2

RX-0262 (Armstrong) at Fig. 2. Armstrong explains: "In this embodiment, wristband 100 and electronic capsule 200 are unassembled. Finger biosensor 220 protrudes from the top of the electronic capsule 200, and aperture 130 is substantially the same dimensions as the profile of

finger biosensor 220.” *Id.* at [0025]. The finger biosensor 220 is attached to the wristband 100 and would presumably be used by placing a finger on the wrist-worn sensor. *See id.*

Respondents rely upon Armstrong solely in combination with Babashan with respect to limitation 1[d] of the ’178 patent for the proposition that “logic circuits” may be implemented as “printed circuit boards” and enclosed within a casing. *See* RPB at 251.

(9) U.S. Patent No. 10,303,867 (“Schröder”)

U.S. Patent No. 10,303,867 (“Schröder”) (RX-0018) describes an external, finger-worn security device that can be used with a smartphone for purposes storing all “security-relevant data” that is necessary for executing applications on the smartphone. *See* RX-0018 at 3:57-4:8. The device may be configured with biometric sensors to allow, for example, for purposes of fingerprint and finger vein recognition. *See id.* at 2:43-52.

Figs. 4 and 5 of Schröder shows an embodiment of disclosed finger-worn security device that includes a finger-ring 2 formed of two ring halves 16 and 18 that form a recess in which an inlay 12 can be inserted. *See id.* at Figs. 4, 5; 12:4-9.

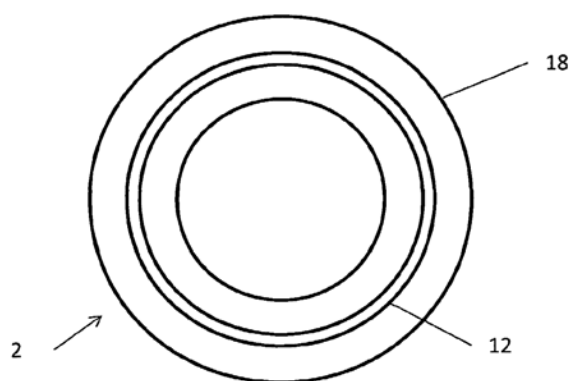


Fig. 4

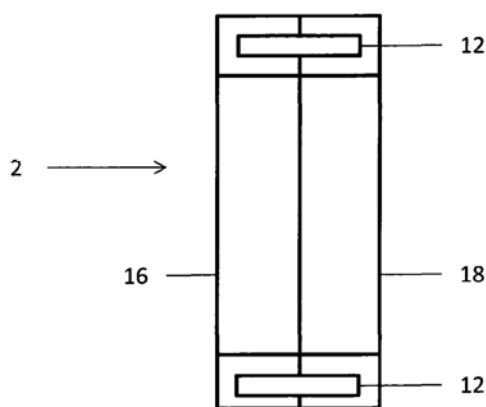
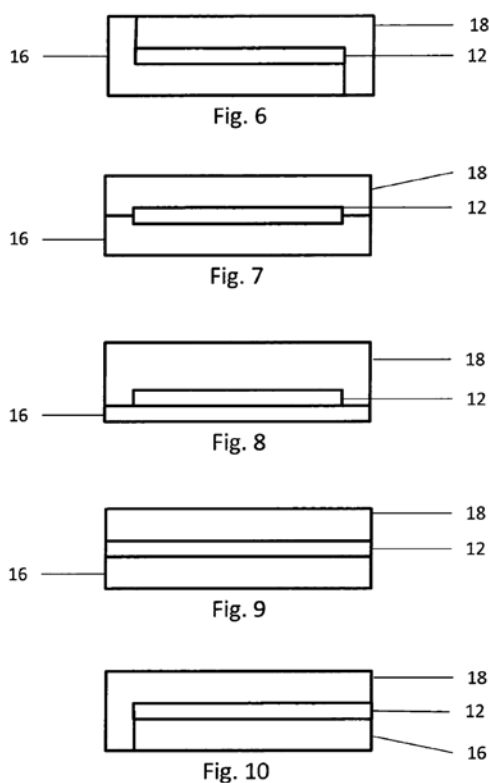


Fig. 5

Id. at Figs. 4, 5. According to Schröder, the inlay 12 is preferably formed of a flexible material on which a chip module 10 and an antenna coil 8 are arranged. *See id.* at 12:29-32. Schröder further explains that the finger-ring 2 may be formed with different cross-sections as shown below in Figs. 6-10.



Id. at Figs. 6-10.

Schröder, however, does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[c], 1[d], and 1[e] of the '178 patent. *See* CPB at 177-184.

(10) Development of the Ring Sensor for Healthcare Automation (“Yang”)

An article by Boo-Ho Yang, titled “Development of the Ring Sensor for Healthcare Automation,” was published in *Robotics and Autonomous Systems* in 2000 (“Yang”). *See* CX-1121 (Yang). The author, Boo-Ho Yang, is a named inventor on the Asada patent discussed above. *See* CX-1134 (Asada). Yang describes the research performed at the Massachusetts Institute of Technology that led to, among other things, the Asada patent. *See generally* CX-1121 (Yang); CX-1134 (Asada). The Yang paper provides “detailed descriptions of the hardware and software of the ring sensor” as shown in Fig. 2.



CX-1121 (Yang) at p. 274, Fig. 2. As explained by Yang, “[t]he ring sensor consists of a ring with LEDs and a photodiode, a four-layer printed circuit board (PCB) for signal processing, another four-layer PCB for wireless transmission, and two batteries.” *Id.* at 275. “The signal processing and the wireless transmission were separated to reduce severe interference between the two functions.” *Id.* Yang also found that “the two circuits have to be powered separately to eliminate signal interference.” *Id.* Finally, as shown above in Fig. 2, “[f]our screws are used in the four ears on the boards to provide mechanical fixtures for the boards.” *Id.*

Furthermore, the disclosures of Yang and Asada are related and are not materially different for purposes of Respondents' arguments. *See generally* CX-1121 (Yang); CX-1134 (Asada). As with Asada, Yang does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the '178 patent. *See* CPB at 158-169.

Moreover, Yang is not materially different than Asada, which was considered by the Examiner during prosecution of the '178 patent, and the asserted claims were found to be patentable. *See* JX-0001 ('178 patent). Accordingly, Respondents' burden of proving invalidity is "especially difficult." *See Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1375 (Fed. Cir. 2006) ("As a preliminary matter, we note that the [prior art] patent was before the Examiner during prosecution, which makes [the challenger's] burden of proving invalidity at trial 'especially difficult.'"), *citing Glaxo Group Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed.Cir. 2004).

b) Comparison of the Claimed Invention and the Prior Art

(1) Asada

Respondents contend that Asada in combination with the knowledge of a person of ordinary skill in the art, Wissmar, Schröder, Yang, Webster, Henderson, and/or the commercial availability of GMBPower batteries would render obvious the asserted claims of the '178 patent. *See* RPB at 209-237. Respondents, however, fails to separately address the *Graham v. John Deere* factors for each unique combination of prior art references that it relies upon as required

by Ground Rule 11.2. *See* Order No. 2 (Apr. 17, 2024) (“Obviousness arguments using “and/or” or “or” nomenclature to combine references are not preserved.”).

As discussed above, Asada does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the ’178 patent. *See* CPB at 158-169. And furthermore, Respondents do not explain why a person of ordinary skill in the art would arrive at the claimed invention from the various prior art references, but instead appear to use the ’178 patent as a roadmap to assemble the various pieces of prior art to arrive at the claimed invention. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019) (warning of the risks of “allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—i.e., the impermissible *ex post* reasoning and hindsight bias that *KSR* warned against.”).

Accordingly, the Staff does not expect clear and convincing evidence to show that any claim of the ’178 patent is invalid in light of Asada alone or in combination with other prior art references. *See* CPB at 158-169.

(2) Babashan

Respondents contend that Babashan anticipates or, in combination with the knowledge of a person of ordinary skill in the art, Wissmar, Asada, Niwa, and/or Armstrong renders obvious the asserted claims of the ’178 patent. *See* RPB at 237-276. But as discussed above, Babashan does not disclose a finger-worn wearable ring device with both internal and external housing components as required by limitations 1[a] and 1[b]. *See* CPB at 169-177. In addition,

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Respondents do not appear to argue that it would have been obvious to modify the teaching of Babashan to incorporate internal and external housings in accordance with the limitations of claims 1[a] and 1[b]. *See* RPB at 237-276. Babashan thus fails to anticipate or render obvious any claim of the '178 patent. *See* CPB at 169-177. Moreover, Respondents fail to separately address the *Graham v. John Deere* factors for each unique combination of prior art references that it relies upon as required by Ground Rule 11.2. *See* Order No. 2 (Apr. 17, 2024) (“Obviousness arguments using “and/or” or “or” nomenclature to combine references are not preserved.”).

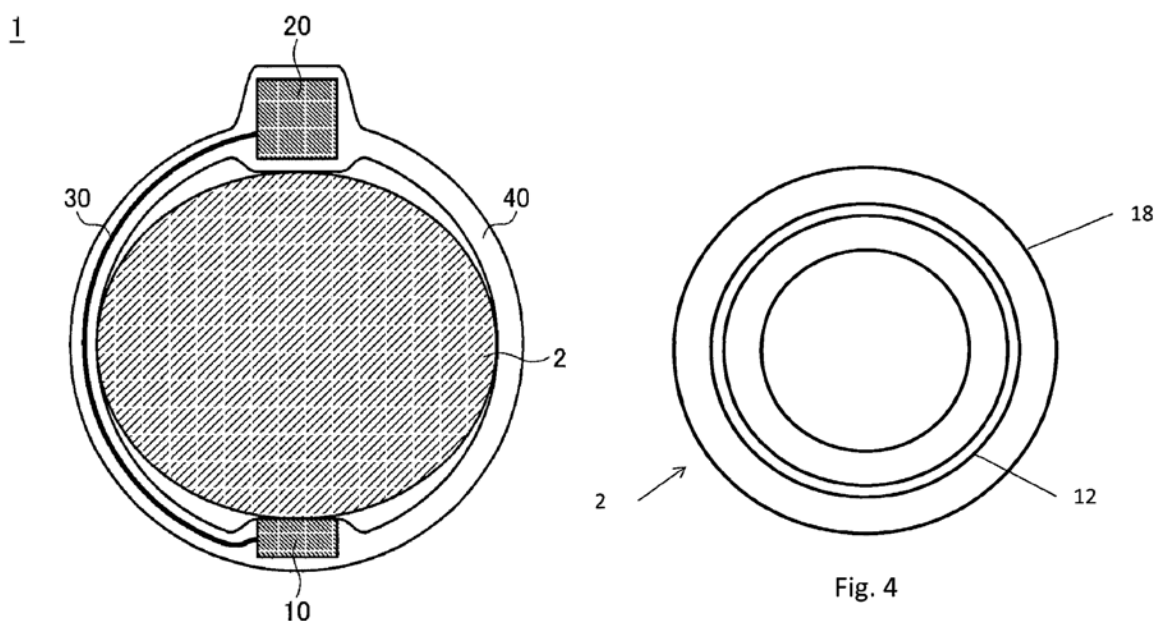
As discussed above, Babashan also does not disclose a finger-worn wearable ring device with a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[c] and 1[d] of the '178 patent. *See* CPB at 169-177. And as with Asada, Respondents do not explain why a person of ordinary skill in the art would arrive at the claimed invention from the various prior art references, but instead appear to use the '178 patent as a roadmap to assemble the various pieces of prior art to arrive at the claimed invention. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019) (warning of the risks of “allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—i.e., the impermissible *ex post* reasoning and hindsight bias that *KSR* warned against.”).

Accordingly, the Staff does not expect clear and convincing evidence to show that any claim of the '178 patent is invalid in light of Babashan alone or in combination with other prior art references. *See* CPB at 169-177.

(3) Niwa

Respondents contend that Niwa anticipates or, in combination with the knowledge of a person of ordinary skill in the art or Schröder, renders obvious the asserted claims of the '178 patent. *See* RPB at 276-326. But as discussed above, Niwa does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the '178 patent. *See* CPB at 177-184. Niwa thus fails to anticipate any claim of the '178 patent. *See id.*

Respondents contend that it would have been obvious to modify the ring disclosed by Niwa to use internal and external housing components required by claim 1 of the '178 patent. *See* RPB at 276-326. For example, Respondents propose combining the disclosure of Niwa (shown on the left) with Schröder (shown on the right) because “each relates to the same well-known technologies and to wearable biometric sensing devices having similar structural components including inner and outer housing components, a cavity, and electronic components within the cavity.” *See* RPB at 277-285.



CX-1133 (Niwa) at Fig. 22 (left); RX-0018 (Schröder) at Fig. 4 (right). This reasoning, however, is not persuasive. *See* CPB at 177-184. First, Respondents are not expected to show that Niwa discloses inner and outer housing components. *See id.* Second, it is not enough that the references are in the same general technological art and have some similarities, there must be a logical reason that a person of ordinary skill would have arrived at the claimed invention. *See id.* And although it may be a close call, the Staff expects Dr. Rosing to offer persuasive testimony that the asserted claims of the '178 patent would not have been obvious to a person of ordinary skill in the art at the time of invention. *See* CPB at 177-184.

Accordingly, the Staff does not expect clear and convincing evidence to show that any claim of the '178 patent is invalid in light of Niwa alone or in combination with other prior art references. *See* CPB at 177-184.

(4) Schröder

Respondents contend that Schröder anticipates or, in combination with the knowledge of a person of ordinary skill in the art, Wissmar, Niwa, Webster, Henderson, and/or the commercial

availability of GMBPower batteries renders obvious the asserted claims of the '178 patent. *See* RPB at 326-355. But as discussed above, Schröder does not disclose or suggest a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[c] and 1[d] of the '178 patent. *See* CPB at 177-184. Babashan thus fails to anticipate or render obvious any claim of the '178 patent. *See id.* Moreover, Respondents fail to separately address the *Graham v. John Deere* factors for each unique combination of prior art references that it relies upon as required by Ground Rule 11.2. *See* Order No. 2 (Apr. 17, 2024) (“Obviousness arguments using “and/or” or “or” nomenclature to combine references are not preserved.”).

And as with Asada, Respondents do not explain why a person of ordinary skill in the art would arrive at the claimed invention from the various prior art references, but instead appear to improperly use the '178 patent as a roadmap to assemble the various pieces of prior art to arrive at the claimed invention. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019) (warning of the risks of “allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—i.e., the impermissible *ex post* reasoning and hindsight bias that *KSR* warned against.”).

Accordingly, the Staff does not expect clear and convincing evidence to show that any claim of the '178 patent is invalid in light of Schröder alone or in combination with other prior art references. *See* CPB at 177-184.

(5) Wissmar

Finally, Respondents contend that Wissmar anticipates or, in combination with the knowledge of a person of ordinary skill in the art, and/or Schröder renders obvious the asserted

claims of the '178 patent. *See* RPB at 355-400. But as discussed above, Wissmar does not disclose a finger-worn wearable ring device with both internal and external housing components, a battery positioned within a cavity formed between internal and external housing components, or a printed circuit board disposed between the internal and external housing components as required by limitations 1[a], 1[b(i)], 1[b(ii)], 1[c], 1[d], and 1[e] of the '178 patent. *See* CPB at 196-209. Wissmar thus fails to anticipate any claim of the '178 patent. *See id.*

Furthermore, Respondents do not explain why a person of ordinary skill in the art would arrive at the claimed invention from the various prior art references, but instead appear to use the '178 patent as a roadmap to assemble the various pieces of prior art to arrive at the claimed invention. *See TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019) (warning of the risks of “allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from the prior art—i.e., the impermissible *ex post* reasoning and hindsight bias that *KSR* warned against.”).

Accordingly, the Staff does not expect clear and convincing evidence to show that any claim of the '178 patent is invalid in light of Wissmar alone or in combination with other prior art references. *See* CPB at 196-209.

c) Objective Indicia of Non-Obviousness

Oura contends that evidence of secondary considerations of nonobviousness weigh against a finding of obviousness. *See* CPB at 212-224. In this regard, Oura bears the burden of showing that the offered evidence of secondary considerations has a nexus to the claimed invention of the '178 patent. *See WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999); *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019) (“[T]here must be ‘a legally and factually sufficient connection’ between the evidence and the

patented invention.”), *citing Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). Each alleged consideration is addressed below.

Commercial Success: Oura contends that the inventions of the '178 patent have achieved marketplace success as evidenced by its sales figures and revenue. *See* CPB at 212-213. Conversely, Respondents contend that any success shown by Oura is attributable to its marketing, as opposed to the claim inventions of the '178 patent. *See* RPB at 401-410. The '178 patent arose from Oura's corporate acquisition of Motiv through an intermediary. *See* RPB at 401. Motiv's product development led to the initial patent filings of parent applications to the '178 patents. *See id.* Although the '178 patent was based on Motiv's products, Respondents argue that Motiv was unsuccessful, thus providing evidence that Oura's success is not attributable to the inventions of the '178 patent. *See id.* at 401-410.

Copying: Next, Oura contends that Respondents copied the structural design of the Oura Ring Gen. 3 in designing the Accused Products. *See* CPB at 213-222. In this regard, RingConn's corporate representative testified at his deposition that RingConn purchased and analyzed Oura's product in 2021. *See* RPB at 221. According to Oura, Respondents used the Oura Ring as a roadmap to design and develop the Accused Products, incorporating the patented features of the Oura Ring and other aspects of its design. *See* CPB at 213-222. Conversely, Respondents contend that, although they had access to the Oura Ring, they independently developed the Accused Products that incorporated design aspects of the Oura Ring. *See* RPB at 411-415.

Long-Felt But Unmet Need: Oura contends that the '178 patent resolved a long-felt need for a wearable monitoring device that permitted continuous, 24-hour monitoring of health conditions, including sleep tracking. *See* CPB at 222. Conversely, Respondents contend that

there was no long-felt need for the inventions of the '178 patent because the claimed invention was already shown in the prior art. *See* RPB at 415-417.

Failure of Others: Next Oura contends that evidence will show that many others failed to achieve the results of the '178 patent. *See* CPB at 222-223. For example, Oura argues that Asada and the associated MIT research had envisioned a wearable device, but were unable to achieve the form factor of the claimed invention of the '178 patent. *See id.* Conversely, Respondents argue that the size and shape of the prior art devices is irrelevant to whether others tried and failed to make the inventions of the '178 patent. *See* RPB at 417.

Industry Praise: Finally, Oura contends that industry praise weighs in favor of patentability. *See* CPB at 223-224. In this regard, Oura cites to numerous accolades that its products have achieved, from “Best Product” by Forbes Women Awards 2020 to the 2023 Men’s Health Sleep Award. *See id.*; CX-0619; CX-0632.

Nexus: As discussed above, Oura’s DI products practice claims 1, 2, and 12-14 of the '178 patent. In this regard, “a patentee is entitled to a rebuttable presumption of nexus between the asserted evidence of secondary considerations and a patent claim if the patentee shows that the asserted evidence is tied to a specific product and that product is ‘the invention disclosed and claimed.’” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019), *citing* *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). Oura is thus entitled to a rebuttable presumption of nexus. *See id.* Conversely, Respondents have not offered any evidence to rebut this presumption. *See* RPB at 400-417.

Conclusion: The Staff expects the evidence is expected to show that secondary considerations of nonobviousness weigh slightly against a finding of invalidity. *See id.*

d) Conclusion

For the reasons set forth above, the Staff does not believe that Respondents will meet their burden to show by clear and convincing evidence that any of the asserted claims of the '178 patent is invalid as anticipated under 35 U.S.C. § 102 or as obvious under 35 U.S.C. § 103.

VI. DOMESTIC INDUSTRY – ECONOMIC PRONG

A. Legal Standard

In an investigation based on claims of patent infringement, Section 337 requires that an “industry in the United States, relating to the articles protected by the patent” exist or be in the process of being established. 19 U.S.C. § 1337(a)(2). A domestic industry, according to Section 337(a)(2), consists of that portion of a complainant’s (or its licensees’) activities and facilities in the United States that are devoted to the exploitation of the patent rights at issue. *See Certain Integrated Circuit Chipsets and Products Containing Same*, Inv. No. 337-TA-428, Order No. 10 at 3, Initial Determination (May 4, 2000) (unreviewed) (“*Chipsets*”), *citing Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, Comm’n Op. at 15 (Nov. 1996) (“*Wind Turbines*”). This requires a showing by the Complainant that the technical and economic prongs of the domestic industry requirement of Section 337(a)(3) are satisfied.

With respect to the economic prong of the domestic industry requirement under Section 337(a)(2), a complainant may show that a domestic industry exists or under any of the three statutory grounds set forth in Section 337 (a)(3), which provides:

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent...concerned –

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

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(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3). Given that these criteria are in the disjunctive, satisfaction of any one of them will be sufficient to meet the domestic industry requirement. *Certain Integrated Circuit Chipsets and Products Containing Same*, Inv. No. 337-TA-428, Initial Determination (May 4, 2000) (unreviewed), citing *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, Commission Op. at 15 (Nov. 1996).

The economic prong relates to whether the investments are “significant” or “substantial.” Satisfaction of the economic prong of the domestic industry requirement under Section 337 is not determined by a rigid formula. The inquiry is an examination of the realities of the marketplace, *e.g.*, how the products at issue are sold. *Certain Double-Sided Floppy Disk Drives and Components Thereof*, Inv. No. 337-TA-215, Comm’n Op., 227 USPQ 982, 989; *Certain Telephonic Digital Added Main Line Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-400, Order No. 6, Init. Determination (November 14, 1997) (economic prong of the domestic industry requirement satisfied by aggregate data). Moreover, no requirement exists that the domestic industry be of any particular size. *Wind Turbines*, Commission Op. at 21; *Bally/Midway Mfg. Co., v. U.S. Int’l Trade Comm’n*, 714 F.2d 1117, 1123 (Fed. Cir. 1983), citing *In re Von Clem*, 229 F.2d 441, 444 (CCPA 1955).

Although the Commission will occasionally look to evidence subsequent to the filing of the complaint, the Commission has held that “as a general matter, the only activities that are relevant to the determination of whether a domestic industry exists or is in the process of being established are those that occurred before the complaint was filed.” *Certain Video Game Systems*, Inv. No. 337-TA-743, Comm’n Op. at 5 (January 20, 2012) citing *Certain Coaxial*

Connectors and Components Thereof and Products Containing Same, Inv. No. 337-TA- 650, Commission Opinion at 51 n.17 (April 14, 2010).

B. Discussion

Oura contends that it satisfies the economic prong of the domestic industry requirement under 19 U.S.C. § 1337(a)(3)(A) and (B) based on its domestic investments in plant, equipment, labor, and capital related to technical support and research and development (“R&D”) activities for the alleged domestic industry products. *See* CPB at 225. The DI Products and associated apps are Oura’s only products. *See id.* Accordingly, all of the company’s investments are made in support of its DI products and all of its revenues are related to those products. *See id.*

1. Plant and Equipment

Oura contends that it has made significant investments in plant and equipment. CPB at 231-234. Oura leases a facility in San Francisco, California, that includes approximately [REDACTED] [REDACTED] that is used by [REDACTED] employees working in [REDACTED] [REDACTED]. *See* CPB at 231-232; CX-0733C; CX-0791C. Oura also leases a facility in San Diego, California, that includes approximately [REDACTED]. that is used by [REDACTED] employees engaged in [REDACTED] [REDACTED]. CPB at 231-232; CX-0732C; CX-0769C. And finally, Oura maintains coworking spaces in Boston and New York for its remote employees in those locations. *See* CPB at 232.

According to Oura, it has invested approximately [REDACTED] in its California facilities, including rent, utilities, and common area maintenance. *See* CPB at 232; CX-0727C; CX-0574C. Through its accounting system, Oura was able to determine the percentage of employees in San Francisco and San Diego who were engaged in R&D and technical support activities. *See*

CPB at 232. Based on these percentages, Oura contends that it invested approximately [REDACTED] from FY 2022 to 2Q FY 2024 that is attributable to its R&D related to the DI Products. In addition, Oura contends that it invested approximately [REDACTED] from FY 2022 to 2Q FY 2024 that is attributable to its domestic technical support activities for its DI Products. *See* CPB at 233; CX-0732C; CX-0506C; CX-0733C.

Oura also contends that it has invested in equipment to support its domestic R&D, including [REDACTED] in non-capitalized equipment, [REDACTED] related to software, and [REDACTED] in other R&D material expenses for a total of [REDACTED] from Q2 FY 2022 through Q2 FY 2024. *See* CPB at 233; CX-0729C; CX-0505C. Oura further contends that it has invested in equipment to support its domestic technical support activities, including [REDACTED] in non-capitalized equipment and [REDACTED] related to software for a total of [REDACTED] from Q2 FY 2022 through Q2 FY 2024. *See* CPB at 233; CX-0729C; CX-0505C.

For the period FY 2022 through Q2 FY 2024, Oura's total U.S. investments in plant and equipment allocable to R&D and technical support for its DI products thus totaled [REDACTED]. *See* CPB at 234; CX-0730C; CX-0574C; CX-0506C; CX-0505C.

2. Labor and Capital

Oura contends that it has made significant domestic investment in labor and capital in support of its DI activities in the United States. *See* CPB at 234-237. Oura maintains a workforce of [REDACTED] individuals in the United States, including [REDACTED] employees responsible for its DI activities. *See* CPB at 234; CX-0734C; CX-0735C; CX-0736C; CX-0575C; CX-0576C. Of those employees, [REDACTED] are responsible for research & development and [REDACTED] are responsible for technical support regarding the DI Products. *See* CPB at 234; CX-0731C; CX-0736C; CX-0506C; CX-0575C; CX-0576C. Because the DI Products are Oura's only products, Oura

contends that all of its domestic labor costs in research & development and technical support are attributable to its domestic industry.

In addition to labor, Oura has made capital investments in the United States related to its DI Products. *See* CPB at 235-236. Specifically, Oura has engaged in a number of studies with experts on topics such as sleep, heart health, and reproductive health, among other things, to support and improve its DI Products. *See id.* at 235. This includes payments made to universities, medical facilities, and consultants in the United States. *See id.* at 235-236. Between FY 2022 and Q2 FY 2024, Oura's capital investments in the United States attributable to its DI Products totaled approximately [REDACTED]. *See id.* at 236; CX-0738C; CX-0515C.

For the period FY 2022 through Q2 FY 2024, Oura's total U.S. investments in labor allocable to research & development and technical support for its DI products totaled approximately [REDACTED]. *See* CPB at 236; CX-0730C; CX-0574C; CX-0506C; CX-0505C. In addition, Oura's total capital investments for that same time period in external third-party R&D services totaled approximately [REDACTED]. *See id.*

3. Quantitative and Qualitative Significance

Oura contends that its DI investments in R&D and technical support for its DI Products are both quantitatively and qualitatively significant. *See* CPB at 237-242. Oura's DI Products are its only products and thus [REDACTED] of its sales are attributable to its DI Products. *See* CPB at 239; CX-0720C; CX-0573C. Oura's U.S. sales account for approximately [REDACTED] of its worldwide sales. *See* CPB at 239; CX-0723C; CX-0581C. [REDACTED]
[REDACTED], Oura has significant domestic operations to design and develop products that will appeal to its biggest market and to provide technical support for its customers. *See id.* In this regard, [REDACTED] worldwide employees are based in the United States

representing [REDACTED] of its worldwide employees and [REDACTED] of its worldwide labor costs. *See* CPB at 239-240; CX-0746C; CX-0506C; CX-0573C; CX-0575C; CX-0576C.

With respect to R&D, Oura contends that its DI investments are quantitatively significant based on the following comparisons: (i) Oura's DI investments in R&D account for approximately [REDACTED] of its overall U.S. labor costs (*see* CPB at 240; CX-0736C; CX-0575C; CX-0576C); (ii) Oura's DI investments in plant and equipment [REDACTED] of its worldwide R&D plant and equipment costs (*see* CPB at 240; CX-0744C; CX-0574C; CX-0506C; CX-0819C; CX-0820C; CX-0505C); (iii) Oura's DI investments in R&D labor account for [REDACTED] of its worldwide R&D workforce and [REDACTED] of its worldwide R&D labor costs (*see* CPB at 240-241; CX-0751C; CX-0575C; CX-0576C; CX-0800C).

Oura contends that its DI investments in R&D are qualitatively significant because the majority of its sales are associated with U.S. consumers, and thus its R&D activities in the United States are critical to its ability to meet the needs of the U.S. market. *See* CPB at 237. In addition, Oura contends that it has great access to top scientific and medical research institutions in the U.S. and that a majority of its research operations and collaborations with research partners are conducted in the U.S. *See id.* And finally, the majority of Oura's R&D activities surrounding the development of new algorithms and new health sensing capabilities occur in the U.S. *See id.*

With respect to technical support, Oura contends that its DI investments are quantitatively significant based on the following comparisons: (i) Oura's U.S. technical support plant and equipment investments account for approximately [REDACTED] of its worldwide technical support plant and equipment investments (*see* CPB at 241; CX-0744C; CX-0574C; CX-0506C; CX-0819C; CX-0820C; CX-0505C); (ii) on a headcount basis, approximately [REDACTED] of Oura's

worldwide workforce responsible for technical support is based in the United States (*see* CPB at 241-242; CX-0747C; CX-0506C); and (iii) Oura's DI investments in technical support labor costs account for 82.8% of its worldwide total (*see* CPB at 242; CX-0751C; CX-0575C; CX-0576C; CX-0800C).

And finally, with respect to technical support, Oura contends that its DI investments are qualitatively significant because, even though foreign contractors handle basic user support questions, its U.S. technical support employees typically address complex issues that arise. *See* CPB at 238-239. And its U.S.-based technical support staff plays an important role in ensuring a positive user experience with the DI Products. *See* CPB at 239. According to Oura, having domestic technical support staff in U.S. time zones and the ability communicate effectively regarding technical issues is critical to Oura's ability to respond to requests and address concerns in a timely fashion. *See id.*

Respondents raise general criticisms regarding Oura's failure to compare its DI investments to its foreign contracting manufacturing costs, and argue that Oura's expert, Ms. Mulhern, could have done more analysis, for example, by visiting each Oura office, and by considering whether each particular research project was related to the patented invention. *See* RPB at 418-425. None of Respondents' criticisms, however, appear to be well-founded. In the Staff's view, it was appropriate for Ms. Mulhern to allocate expenditures based on R&D and technical support accounting codes, and to assume that those domestic expenditures were attributable to Oura's DI products because those are the only products that Oura sells.

Accordingly, the Staff expects the evidence to show that Oura's investments are both quantitatively and qualitatively significant. *See* CPB at 237-242

4. Conclusion

Accordingly, for the reasons set forth above, the Staff expects the evidence to show that Oura satisfies the economic prong of the domestic industry requirement with respect to the asserted patent.

VII. REMEDY AND BONDING

Pursuant to Commission Rule 210.42, the Judge is to issue a recommended determination on (1) the appropriate remedy in the event that the Commission finds a violation of Section 337, and (2) the amount of the bond to be posted for importation and sale of affected products during the Presidential review period. 19 C.F.R. § 210.42(a)(1)(ii). With respect to these issues, the Staff submits the following recommendations.

A. Remedial Orders

1. Limited Exclusion Order

Section 337 permits the Commission to issue either a limited exclusion order, which is directed against infringing products manufactured or imported by or on behalf of persons found in violation, or a general exclusion order, directed against all infringing products. *See* 19 U.S.C. § 1337(d). Here, Oura requests issuance of a limited exclusion order, prohibiting Respondents from importing, selling for importation, or selling after importation any infringing articles. CPB at 242-243. Should a violation be found, the Staff recommends that a limited exclusion order issue.

2. Cease and Desist Order

In addition to, or instead of, an exclusion order, the Commission may issue cease and desist orders to respondents violating or believed to be violating Section 337. *See* 19 U.S.C. § 1337(f)(1). Under Commission precedent, “[c]ease and desist orders are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant

inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order.” *Certain Air Mattress Systems, Components Thereof, and Methods of Using the Same*, Inv. No. 337-TA-971, Comm’n Op. at 49 (Jun. 20, 2017) (citations and footnote omitted). “A complainant seeking a CDO must demonstrate, based on the record, that this remedy is necessary to address the violation found in the investigation so as to not undercut the relief provided by the exclusion order.” *Id.* at 50.

Oura requests cease and desist orders because Respondents maintain inventories of accused products in the U.S., the sale of which would undercut the remedy provided by an exclusion order. *See* CPB at 243-44. In this regard, the evidence is expected to show that Ultrahuman had an inventory of [REDACTED] of the accused products in the United States as of June 2024, representing approximately [REDACTED] months of sales. *See* CPB at 243; CX-0756C; CX-0565C; CX-0028C; CX-0790C at Resp. Nos. 9-10. This inventory is sufficient to support Ultrahuman’s domestic sales and activities. *See id.* And with respect to RingConn, the evidence is expected to show that RingConn had an inventory of [REDACTED] of the accused products in the United States as of Q2 2024 worth approximately [REDACTED] million and representing approximately [REDACTED] months of sales. *See* CPB at 243-244; CX-0758C; CX-1387C at 22, 36-39, 42; CX-0773C. This inventory is sufficient to support RingConn’s domestic sales and activities. *See id.* In similar situations, the Commission has issued cease and desist orders. *See Certain Electrical Connectors and Cages, Components Thereof, and Products Containing the Same*, Inv. No. 337-TA-1241, Comm’n Op. at 39 (Sept. 30, 2022) (issuing cease and desist orders where respondent maintained inventory to support sales activities in the United States).

Accordingly, should a violation be found, the Staff recommends that cease and desist orders issue as to Respondents.

3. Limitations and Exclusions

Should the Commission determine to issue a limited exclusion order and/or a cease and desist order, Respondents request that such remedial order be narrowly tailored. *See* RPB at 446-449, 452-454. Specifically, Respondents request the following: (i) that that mobile apps associated with the accused products not be included within any exclusion order (*see* RPB at 446, 452); (ii) that any exclusion order include an exception for service, repair, or replacement (*see* RPB at 448); (iii) that any remedial order include a reporting requirement to require Oura to periodically certify that it is exploiting the '178 patent or it is taking tangible steps to do so in the future (*see* RPB at 448-49, 453); and (iv) that any remedial order include a certification provision (*see* RPB at 453-454). Respondents also argue that the requested remedial orders would not serve the public interest. *See* RPB at 447-448, 452-453. For the reasons set forth below, the Staff recommends that any remedial order include a standard certification provision. However, the Staff does not recommend any additional tailoring of remedial orders at this time. Each of Respondents requests is addressed below.

First, Respondents argue that mobile apps associated with the accused wearable smart rings should not be included within any exclusion order. *See* RPB at 446, 452. According to Respondents, the mobile apps are not articles, they are not imported, and they do not fall within the scope of the asserted claims. *See id.* In this regard, the Staff is of the view that no exemption is necessary “because the Commission’s remedial orders do not cover electronic transmissions or software already in the United States.” *See Certain Fitness Devices, Streaming Components Thereof, and Systems Containing Same*, Inv. No. 337-TA-1265, Comm’n Op. at 76 (Mar. 23, 2023), *citing ClearCorrect Operating, LLC v. Int’l Trade Comm’n*, 810 F.3d 1283, 1293-94 (Fed. Cir. 2015).

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Second, Ultrahuman seeks a repair and replacement exemption should a limited exclusion order issue. *See* RPB at 448. The Commission has on occasion issued limited exclusion orders with such a carve-out. *See Certain Lithium Ion Batteries, Battery Cells, Battery Modules, Battery Packs, Components Thereof, & Processes Therefor*, Inv. No. 337-TA-1159, Comm’n Op. at 79-80 (Mar. 4, 2021) (determining that “the limited exclusion order contain an exemption to allow importation of batteries for repair, replacement, and warranty of batteries for the Kia Niro EV and Kia Soul EVs that have been sold to U.S. consumers as of the date of the Commission’s remedial orders”). Here, however, Ultrahuman does not identify any evidence regarding its warranty and obligations, or the impact on its customers. *See* RPB at 448. Accordingly, the Staff does not expect the evidence at trial to show that a service, repair, and replacement exception would be appropriate.

Third, Respondents request that any remedial order include a reporting requirement requiring Oura to periodically certify that it continues to exploit the patents-in-suit. *See* RPB at 448-449, 453. While the Commission has imposed a reporting requirement on complainants “when it is unclear whether domestic activities related to the DI articles will continue in the future, such as in ‘bankruptcy’ or if there is a ‘complete cessation of DI activity,’” Respondents offer no basis for doing so in this investigation. *See Certain Tobacco Heating Articles and Components Thereof*, Inv. No. 337-TA-1199, Comm’n Op. at 46-49 (Oct. 19, 2021). Accordingly, the Staff does not expect the evidence at trial to show that a reporting requirement would be appropriate.

Fourth, Respondents request that the Commission delay issuance of any remedial order for at least one year to allow existing customers to switch to another product, and allow ongoing research to continue. *See* RPB at 425-426. But in this regard, Respondents fail to show any

adverse effect on existing customers or ongoing research, much less an adverse effect that would be mitigated by a one-year delay. *See id.* Accordingly, the Staff does not expect the evidence at trial to show that a delay would be appropriate.

Fifth, with respect to certification, it is consistent with Commission practice to include a “certification provision to aid Customs and Border Protection (‘CBP’) in enforcing Commission orders.” *See Certain Fitness Devices, Streaming Components Thereof, and Systems Containing Same*, Inv. No. 337-TA-1265, Comm’n Op. at 74 (Mar. 23, 2023) (“The certification provision allows persons to certify that, to the best of their knowledge and belief, the products being imported are not excluded from entry. This standard provision can only be used for products that have been explicitly adjudicated as non-infringing.”). The Staff thus recommends that any remedial orders include a standard certification provision.

Finally, with respect to public interest, the Staff does not believe that the evidence will preclude the issuance of any remedial orders for the reasons set forth below in Section VIII.

B. Bond

If the Commission determines to enter an exclusion order and/or cease and desist orders in this investigation, the affected articles will still be entitled to entry and sale under bond during the 60-day Presidential review period. The amount of such bond must “be sufficient to protect the complainant from any injury.” 19 U.S.C. § 1337(j)(3); *see also* 19 C.F.R. § 210.50(a)(3). The Commission typically sets the Presidential review period bond based on the price differential between domestic product and the imported or infringing product, or based on a reasonable royalty. *See, e.g., Certain Ink Cartridges and Components Thereof*, Inv. No. 337-TA-565, Comm’n Op. at 63 (November 2007) (setting bond based on price differentials); *Certain Plastic Encapsulated Integrated Circuits*, Inv. No. 337-TA-315, Comm’n Op. on Issues

Under Review and on Remedy, the Public Interest, and Bonding, at 45, USITC Pub. 2574 (November 1992) (setting the bond based on a reasonable royalty). However, where the available pricing or royalty information is inadequate, the bond may be set at 100% of the entered value of the accused product. *See, e.g., Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Products Containing Same*, Inv. No. 337-TA-372, Comm’n Op. on Remedy, the Public Interest and Bonding at 15, USITC Pub. 2964 (May 1996). In addition, it is the complainant’s burden to establish support for their requested bonding amount. *See, e.g., Certain Liquid Crystal Display Devices*, Inv. No. 337-TA-631, Comm’n Op. at 28 (July 10, 2009). Should Complainant fail to meet its burden, the Commission may determine that no bond should be imposed during the Presidential review period. *Id.*

Oura contends that a bond is necessary to protect Oura from harm during the Presidential review period because RingConn and Ultrahuman are direct competitors offering competing products at lower overall prices. *See* CPB at 244-251. Based on a price differential analysis, Oura requests that bond be set at 100% of entered value for RingConn and 60.2% for Ultrahuman. *See* CPB at 251.

According to Oura, for Fiscal Year 2023, the average selling price of the Oura Ring was \$395, while the average selling prices of the accused RingConn and Ultrahuman rings were [REDACTED] and [REDACTED], respectively. *See* CPB at 248; CX-0762C; CX-0581C. Based on these averages, bond would need to be set at [REDACTED] of entered value for Ultrahuman and [REDACTED] of entered value for RingConn to offset price differentials. *See id.* This analysis, however, fails to account for the total cost of ownership because, unlike the Oura Ring, the accused products do not require a subscription fee to take advantage of all features. *See* CPB at 247. Based on the total cost of

ownership, Oura contends that bond must be set at [REDACTED] of entered value for Ultrahuman and [REDACTED] for RingConn.

Conversely, Respondents argue that Oura has not met its burden to show that a bond is necessary to protect it from injury during the Presidential review period. *See* RPB at 450-451, 455-457. In addition, Respondents contend that Oura's bond calculations are improper to the extent that they include subscription fees in price differential calculations. *See* RPB at 450-451, 456.

In this regard, the Staff expects the evidence to show that the accused products compete directly with the Oura Ring. *See* CPB at 244-246. For example, Wired Magazine reviews of the accused products recognize and describe them as direct competition to the Oura Ring. *See* CX-0859; CX-0860. Moreover, the evidence is expected to show that the accused products are sold at lower prices than the Oura Ring. *See* CPB at 248; CX-0762C; CX-0581C. In the Staff's view, it is appropriate to consider the total cost of ownership of the Oura Ring as compared to the accused RingConn and Ultrahuman products because a purchaser would consider the Oura Membership subscription fee in deciding which smart ring to purchase. *See* CPB at 246-247; CX-0851; CX-0572; *see also Certain Automated Put Walls and Automated Storage and Retrieval Systems, Associated Vehicles, Associated Control Software, and Component Parts Thereof*, Inv. No. 337-TA-1293, Comm'n Op. at 49 (Aug. 17, 2024) ("The RD finds, and the Commission agrees, that a bond is necessary to prevent harm to [Complainant] because the undisputed evidence shows that (i) [Complainant] and Respondents are direct competitors and (ii) customers can purchase Respondents' infringing systems at a lower price compared to [Complainant's] DI Products.").

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A question remains, however, as to the appropriate length of time to use in calculating the total cost of ownership. *See* RPB at 456-457. Oura calculates the total cost of ownership over a 3-year period based on a 2024 presentation by Ultrahuman comparing the cost of its products to the Oura Ring over that period of time. *See* CPB at 247. But Oura does not provide any evidence to show that a 3-year time period is appropriate. *See* RPB at 409-410, 456-457. Nonetheless, for the reasons set forth above, it would appear appropriate for any bond calculation to take into account some period of Oura Membership subscription fees. *See* CBP at 246-247. As the smart rings at issue in this investigation all have one-year warranties in the United States, the Staff is of the view that the total cost of at least one year of ownership should be considered in calculating an appropriate bond. *See id.* Using an approximate Oura Membership subscription fee of \$70, the total cost of ownership of the Oura Ring would be \$465 based on the average selling price. *See* CX-0762C. Based on this calculation, the price differential for the Ultrahuman Ring AIR is [REDACTED] and the price differential for the RingConn Smart Ring is [REDACTED]. To offset these price differentials, bond should be set at [REDACTED] for Ultrahuman and [REDACTED] as to RingConn. *See id.* (performing calculations with a [REDACTED] as opposed to a [REDACTED] average membership cost).

Accordingly, for the reasons set forth above, the Staff recommends that bond be set at no less than [REDACTED] of the entered value of Ultrahuman articles subject to any remedial orders during the Presidential review period, and [REDACTED] of the entered value of RingConn articles subject to any remedial orders during the Presidential review period.

VIII. PUBLIC INTEREST

In determining the remedy, if any, for a violation of Section 337, the Commission must consider the effect of the remedy on certain public interest considerations: (1) the public health

and welfare; (2) competitive conditions in the United States economy; (3) the production of like or directly competitive products in the United States; and (4) United States consumers. 19 U.S.C. §§ 1337(d) and (f).

In this investigation, the Commission has delegated to the Administrative Law Judge the authority to take evidence, make findings, and issue a recommend determination on the statutory public interest factors. 89 Fed. Reg. 27452-53 (Apr. 17, 2024). Respondents asserts that the statutory public interest factors weigh against the issuance of any remedial orders. *See* RPB at 426-445. If, however, the Commission determines to issue remedial orders, Respondents contend that the statutory public interest factors weigh in favor of tailoring any remedial order to mitigate against the alleged harm to the public interest. *See id.* Each of Respondents' arguments is addressed below.

First, Respondents contend that the requested remedial orders would adversely impact public health and welfare because the Accused Products are used to monitor health and detect early signs of illness. *See* RPB at 427-431, 438-440. Although the Accused Products are not FDA-approved medical devices, Respondents contend that the devices are used in various medical studies that would be impacted by the requested remedial orders. *See id.* Specifically, Ultrahuman cites to a collaboration with [REDACTED] and partnerships with research institutions, including the [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. *See* RPB at 435. RingConn cites to its products use in research studies with the Chinese University of Hong Kong, the National Institutes of Health, the University of Pittsburgh, and Shanghai Jiao Tong University.

See RPB at 444. And Respondents also cite to their ongoing development of improvements and new capabilities for Accused Products. *See* RPB at 436, 443. Respondents, however, fail to identify any tangible evidence that would show how the Accused Products are being used by their collaborators and research partners, and what effect any remedial orders would have on them. *See* RPB at 427-431, 438-440.

Next, Respondents contends that the requested remedial orders would adversely impact competitive conditions in the U.S. economy and harm U.S. consumers by creating “an overly expansive monopoly in the smart ring space to the detriment of consumers.” *See* RPB at 431-433, 440-442. In this regard, Respondents contend that Oura is unable to meet the demand for its own product, and is unable to show that others would have sufficient capacity to meet market demand, should the Accused Products be excluded. *See id.*

Conversely, Oura contends that the requested remedial orders would not adversely impact public health and welfare because of the wide availability of alternative products capable of performing substantially the same activity and health tracking as the Accused Products. *See* CPB at 258-260. In addition, Oura contends that Accused Products are only being used in two ongoing medical studies that are expected to conclude in the next two quarters and thus could not be impacted by any remedial orders in this investigation. *See id.*

Oura also contends that the requested remedial orders would have no material impact on the competitive conditions in the U.S. economy or U.S. consumers. *See* CPB at 251-258. In this regard, the Accused Products represent a small portion of the market. *See* CPB at 251. In the six month period ending May 2024, Respondents sold [REDACTED] units, and compared to Oura’s U.S. sales of [REDACTED] in Q1 through Q2 FY 2024. *See id.*; CX-0763C; CX-0581C; CX-0028C; CX-0773C. According to Oura, it has excess capacity and is continuing to build and add capacity.

PUBLIC

See CPB at 252. Although Oura has experienced isolated instances of unexpected increased demand resulting in delays for certain sizes and certain finishes of its products, Oura has been able to compensate and fulfill 99% of its orders within 30 days. *See* CPB at 253. Furthermore, Oura brought its Mexico facility online in the second half of FY 2024 and now manufactures approximately [REDACTED] fourth-generation units per year, with the option to further increase capacity to [REDACTED] units per year. *See* CPB at 252-253; CX-0801C.

And finally, Oura argues that any adverse impact on the public interest would be mitigated by the availability of alternative third-party products, including the Samsung Galaxy Ring, and the licensed Circular Ring, in addition to Samsung, Fitbit, and Garmin smartwatches and health trackers. *See* CPB at 253-257.

Accordingly, for many of the reasons set forth by Oura, the Staff expects the evidence to show that the requested remedials would have little to no material impact on the statutory public interest factors. *See* CPB at 251-260. The evidence adduced at trial concerning the public interest is thus expected to be insufficient to preclude relief.

IX. CONCLUSION

For all of the foregoing reasons, the Staff expects the evidence to establish a violation of Section 337.

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Respectfully submitted,

/s/ R. Whitney Winston

Margaret D. Macdonald, Director

David O. Lloyd, Supervisory Attorney

R. Whitney Winston, Investigative Attorney

OFFICE OF UNFAIR IMPORT INVESTIGATIONS

U.S. International Trade Commission

500 E Street SW, Suite 401

Washington, DC 20436

(202) 205-2221

November 22, 2024

CERTIFICATE OF SERVICE

The undersigned certifies that on December 4, 2024, he caused the foregoing public version of the **PRE-HEARING BRIEF OF THE COMMISSION INVESTIGATIVE STAFF** to be filed with the Commission and served upon the private parties in the manner indicated below:

Complainants Ouraring, Inc. and Ōura Health Oy

Janine A. Carlan, Esq.
ArentFox Schiff LLP
1717 K Street NW
Washington, DC 20006

VIA EMAIL

Janine.Carlan@afslaw.com
Oura-ITC@afslaw.com

**Respondents Ultrahuman Healthcare Pvt. Ltd.; Ultrahuman
Healthcare SP LLC; and Ultrahuman Healthcare Ltd.**

John T. Moehringer, Esq.
Cadwalader, Wickersham & Taft LLP
200 Liberty St.
New York, NY 10281

VIA EMAIL

john.moehringer@cwt.com
UltrahumanITC1398@cwt.com
UltrahumanITC@cgolaw.com

Respondent RingConn LLC

Robert M. Breetz, Esq.
Jones Day
901 Lakeside Ave.
Cleveland, OH 44114

VIA EMAIL

rbreetz@jonesday.com
RingConnITC1398@jonesday.com

/s/ R. Whitney Winston

R. Whitney Winston
Investigative Attorney

U.S. International Trade Commission
Office of Unfair Import Investigations
500 E Street SW, Suite 401
Washington, DC 20436
(202) 205-2221