

Filed on behalf of ResMed Corp.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESMED CORP.,
Petitioner

v.

CLEVELAND MEDICAL DEVICES, INC.,
Patent Owner

Case No. IPR2025-00158
U.S. Patent No. 11,690,512

**PETITIONER'S REPLY
TO PATENT OWNER'S RESPONSE**

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I. INTRODUCTION

The Parties dispute the Petition's Claim 1 "computer" and "second processor" mappings. PO alleges that Orbach does not disclose a cell phone that transmits sleep data over cell towers to a computer (or a second processor) that analyzes and displays that data. Allegedly Orbach discloses two computers (or processors), and neither receives, analyzes, *and* displays sleep data. Not true.

PO reads Claim 1 much too narrowly. For instance, arguing Petitioner needed an obviousness analysis to combine Orbach's remote server 140 and viewing station 150, PO misses that 140 and 150 constitute "*a computer*," consistent with Claim 1's limitation that a computer can be "*at one or more sites*." PO does not dispute, nor could it, that Orbach discloses a cell phone that transmits sleep data over cell towers to 140 and 150, which analyzes and displays that data.

PO also argues no motivation to combine: Ciulla discloses that its sensing module can transmit data, and apparently a POSITA would have had no need to use Orbach's communication technique. Ultimately, a POSITA would have had ample reason to modify the Ciulla system to use a cell phone to transmit sleep data to a computer or processor at one or more sites, as disclosed by Orbach and other state-of-art references. The Board thus should find all challenged claims unpatentable.

II. THE BOARD SHOULD REJECT PATENT OWNER'S THREE IMPLIED AND OVERLY NARROW CLAIM CONSTRUCTIONS FOR CLAIM 1

Although PO argues that the Board need not construe any claim limitations, Paper 24 (POR) 4, PO nonetheless argues narrow constructions, which the Board should reject. *See Collabo Innovations, Inc. v. Sony Corp.*, 778 F. App'x 954, 958 (Fed. Cir. 2019) (Board can construe claim term to address “implicit” construction first advanced in POR to resolve parties’ dispute). Rejecting *any* of PO’s constructions confirms that Orbach discloses the disputed “computer” and “second processor” limitations. *See infra* §§ III.A-C.

A. Properly construed, Claim 1’s “a computer” refers to one or more computers at one or more sites.

The Board must reject PO’s implicit construction limiting “a computer” to a single computer that cannot refer to one or more computers (or devices) at one or more sites. PO, arguing that “a computer” cannot include “two different devices” or “two different computers,” POR, 5-6, fails to address that Claim 1 expressly claims ***“a computer...at one or more sites remote to the first location.”***¹ EX1001, 21:4-7 (Element 1.d). This ***“at one or more sites”*** language confirms that “a computer” can refer to one or more devices because the computer can be at different sites. *Id.*;

¹ All emphasis added unless noted otherwise.

Merck & Co. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1372 (Fed. Cir. 2005) (claim construction that “gives meaning to all the terms of the claim is preferred” over one that leaves a portion of the claim “superfluous”). PO never addresses the “at one or more sites” language in its POR and has waived any argument distinguishing the language. *See, e.g., Driessen v. Best Buy Co., Inc.*, No. 22-1907, 2023 WL 2422441, at *3 (Fed. Cir. Mar. 9, 2023).

Nothing in the prosecution history or patent specification disclaims or limits the “*at one or more sites*” language. EX1001; EX1002. Instead, the '512 Patent generically describes a “computer” as a device, with or without a screen, that can wirelessly receive signals and communicate. EX1001, 15:44-48 (“a computer or processor, which receives the data transmission and displays the data or records it”), 19:56-60, 10:36-40 (“a base station, a transceiver hooked to a computer, ... a wireless network, or the like”); *see also id.* at 15:61-66 (“to another monitor, computer, or processor system”). Such a black-box description does not unambiguously limit “a computer” to a device at one site. *See 01 Communique Lab., Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012) (“locator server computer” included multiple physical devices even though specification illustrated a single device).

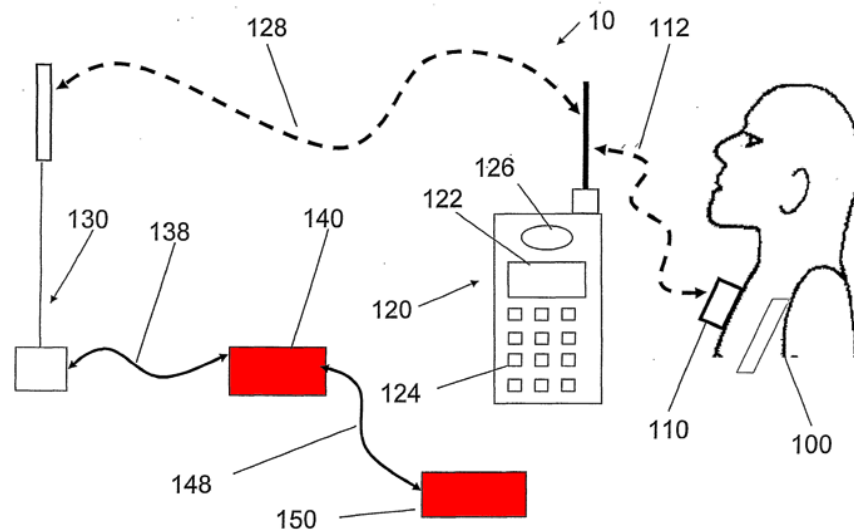
Moreover, when open terminology is used in the preamble, the recitation of the singular article “a” does not limit the claim element to a single item, and instead

refers to “one or more” such elements. *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000) (“[A]n indefinite article ‘a’ or ‘an’ in patent parlance [means] ‘one or more’ in open-ended claims containing the transitional phrase ‘comprising.’”). Such is the case here.

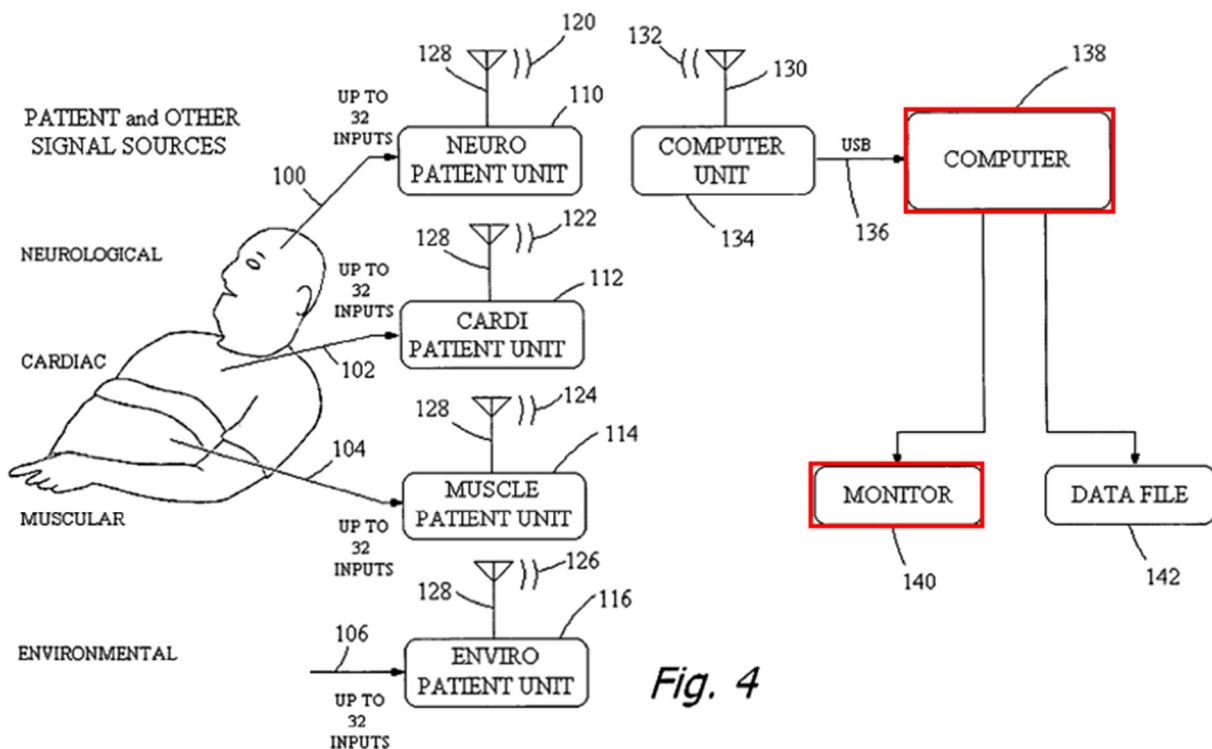
Claim 1’s preamble specifies an open-ended “comprising” system, and “*a computer*” therefore means “one or more computers,” consistent with the claim language that the computer can be “*at one or more sites*.” EX1001, 20:17-18, 21:4-6. Thereafter, “*the computer*” refers to the one or more computers at one or more sites. *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342-43 (Fed. Cir. 2008) (“Because the initial indefinite article (‘a’) carries either a singular or plural meaning, any later reference to that same claim element merely reflects the same potential plurality.”).

1. Applying the proper construction of “a computer” resolves the dispute regarding Orbach.

As explained further in Section III.A, *infra*, Orbach discloses a remote server 140 that connects to viewing station 150.



EX1008, FIG. 1 (annotated); Paper 1 (Pet.) 10-11. The Parties do not dispute that the combination of 140 and 150 receives, analyzes, and displays sleep data as claimed. POR, 1 (“[T]o the extent that the limitations are taught they are split between Orbach’s remote server and viewing station computer.”). PO instead contends 140 and 150 are “two different computers.” POR, 6-9. But the disclosure in Orbach parallels the disclosure in the ’512 Patent in which the combination of computer 138 connected to monitor 140 receives, analyzes, and displays the sleep data. *See* EX1001, Fig. 4 (below); Pet. 48-54.



Finding that Orbach's remote server 140 and viewing station 150 constitute *"a computer or a second processor at one or more sites"* (see Pet., 48-49) resolves PO's Orbach qualms, reducing the dispute to PO's deficient motivation to combine argument.

B. Properly construed, "a computer or a second processor" in Claim 1 analyzes and displays the sleep data sent from the cell phone over cell towers.

The Board should reject PO's implicit construction that only the same

“computer” must receive², analyze, *and* display sleep data. *See* POR, 1, 3, 5-9. PO’s argument ignores that Claim 1 expressly and broadly claims “a computer *or* a second processor at one or more sites” to which sleep data is transmitted, and that second software on “the computer *or* the second processor” can “analyze, output and/or format” and “display” “the sleep data.” EX1001, 21:4-25 (Elements 1.d-1.g).

Use of the conjunction “*or*” throughout Claim 1 requires a broader construction than PO applied. *See Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001) (affirming “or” in “two-digit, three-digit, or four-digit year-date representations” claim limitation denoted “only two-digit, only three-digit, only four-digit, or any combination of two-, three-, and four-digit date-data”). Here, the plain meaning of the “a/the computer *or* a/the second processor” language in elements 1.d-1.g refers to a computer, a second processor, or a combination thereof, as long as a computer *or* a second processor at one or more sites can execute second software. *Id.*

PO’s narrow construction improperly excludes disclosed embodiments. *See*

² PO’s argument is imprecise. Claim 1 does not recite “a computer” that receives sleep data. Instead, the cell phone transceiver transmits sleep data over cell towers to the computer or second processor for analysis. In any event, Orbach discloses the claimed configuration in several ways. *Infra* §§ III.A-D.

Oatey Co. v. IPS Corp., 514 F.3d 1271, 1276 (Fed. Cir. 2008) (“We normally do not interpret claim terms in a way that excludes embodiments disclosed in the specification.”); *Google LLC v. EcoFactor, Inc.*, 92 F.4th 1049, 1058 (Fed. Cir. 2024). For instance, the ’512 Patent system can include “two different remote communication stations.” EX1001, 15:30-33. And one of those stations “can include”:

- “a communications device for relaying the transmission”
- “a communications device for re-processing the transmission then relaying it to another remote communication station”
- “a computer”
- “a processor with display capabilities”
- “and combinations of these devices.”

EX1001, 15:16-48. That is, the ’512 Patent expressly discloses a “communications device for relaying the transmission” (*i.e.*, computer) and/or “re-processing the transmission then relaying it to another remote communication station” that includes a processor. *Id.*

Although a computer can receive, analyze, and display sleep data as PO identifies, *id.*, PO ignores that the “or” claim term and specification indicate that second processor software can analyze and display sleep data if a computer re-transmits the sleep data from cell towers “for analysis” by the second processor.

1. Applying the proper construction of “a computer or a second processor” resolves the dispute regarding Orbach.

As explained in Section III.B, *infra*, Orbach discloses a remote server 140 (a “computer”) to which sleep data is transmitted (*see infra* § III.A) and a viewing station 150 that includes a processor that analyzes and displays such data (*see infra* § III.B). *See, e.g.*, EX1008, 13:21-14:2, 41:25-27, 3:19-4:4. Thus, finding PO's apparent construction as too narrow would reduce the POR arguments to PO's deficient motivation to combine argument.

C. Properly construed, Claim 1 does not require a direct connection between the claimed cell towers and the computer or the second processor.

The Board should reject PO's implicit construction that a system only transmits sleep data “*over cell towers to the computer*” (Element 1.e) if the computer and cell towers have a direct connection. *See* POR, 6-7 (arguing that Orbach's “viewing station computer ... does not receive data from a cell phone's/PDA's wireless transceiver that is over cell towers” because Orbach's remote computer 140 “retransmits the data ... to the ... viewing station computer”). PO again reads Claim 1 too narrowly.

PO's “*over cell towers to the computer*” position disregards that Claim 1 is not limited to a direct cell phone-computer communication. The plain language of Claim 1 requires a cell phone to re-transmit sleep data “*over cell towers to the*

computer or the second processor.” EX1001, 21:8-14. The “*over cell towers*” language indicates the claimed communication medium; the “*to the computer or the second processor*” language indicates the eventual destination for the data. *Id.* And nothing in the “*over cell towers to the computer or the second processor*” phrasing, the specification, or the prosecution history excludes embodiments where an intervening router, etc. relays data to the computer or the second processor when a cell phone re-transmits the data over cell towers. EX1001; EX1002.

PO's position for the transmitting sleep data “*over cell towers to the computer*” claim limitation also improperly reads out the '512 Patent's embodiments where a cell phone sends data over cell towers to a computer or a second processor via an intervening communications device. *See Oatey*, 514 F.3d at 1276. Indeed, in the only passage that mentions “cell towers,” the '512 Patent specification discloses a cell phone can send sleep data “*over cell towers to the computer or the second processor*” with or without a relaying device. EX1001, 15:39-44. For instance, a cell phone is a first communication station in a two-remote-communication-station system; the second communication station can comprise a relaying device and a destination computer (or processor) as discussed previously. *Supra* § II.B; EX1001, 15:16-48.

Accordingly, communicating “*over cell towers to the computer or the second processor*” includes from cell towers to the remote computer or second processor

destination, with or without the use of an intervening router, relaying device, etc.

1. Applying the proper construction of “over cell towers to the computer or the second processor” resolves the dispute regarding Orbach.

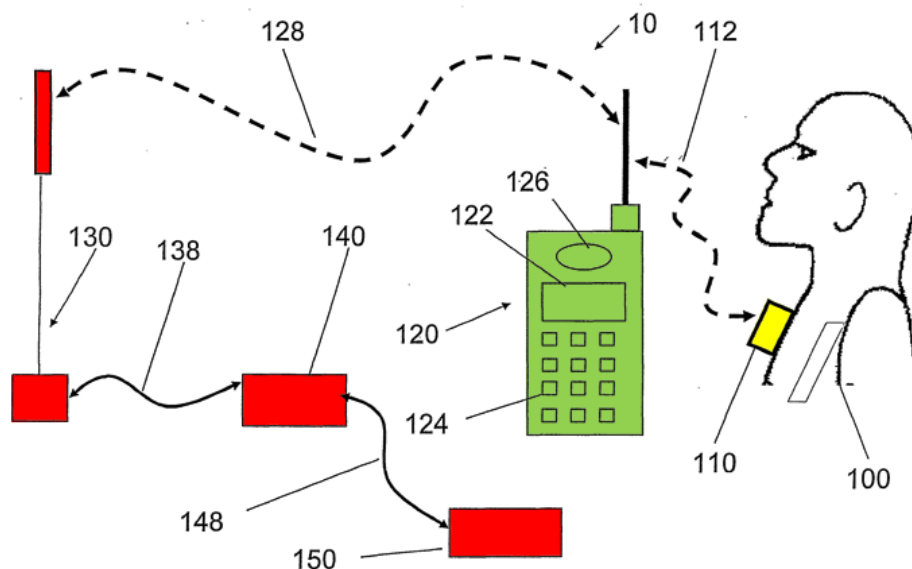
As explained in Section III.C, *infra*, Orbach discloses sending sleep data over cell towers to its viewing station 150 computer via intervening remote server 140 (*see infra* § III.A). *See, e.g.*, EX1008, 13:21-14:2, 41:25-27. Rejecting PO's apparent direct connection construction would distill the dispute to PO's motivation to combine argument.

III. ORBACH'S REMOTE SERVER 140 AND VIEWING STATION 150 DISCLOSE THE PROPERLY CONSTRUED COMPUTER AND SECOND PROCESSOR LIMITATIONS OF CLAIM 1

PO's narrow, apparent constructions target Claim 1's system for sending sleep data to a computer (or processor) for analysis and display. As claimed, a “**computer or a second processor**” is located at “**one or more sites.**” EX1001, 21:4-7 (Element 1.d). A cell phone transmits the sleep data “**over cell towers to the computer or the second processor for analysis.**” *Id.* at 21:8-14 (Element 1.e). And “**second software**” of the computer or second processor is configured to “**analyze, output and/or format the sleep data**” and “**display ... the sleep data.**” *Id.* at 21:15-25 (Elements 1.f-1.g).

PO's misunderstanding of Claim 1 does not change that Orbach squarely discloses what is required—a cell phone that sends sleep data to a computer or

processor at one or more sites for analysis and display. Orbach's cellular phone/mobile monitor 120 (green) receives sleep data from sensor module 110 (yellow) and sends that data to server 140 and viewing station 150 (red). EX1008, 13:21-14:2 (“[A] communication link 128 ... connect[s] the mobile monitor 120 to a remote server 140 [D]ata link 148 ... connects the remote server 140 to a viewing station 150”), 41:25-27 (“[T]he system may be used to record physiological reading while the user is sleeping”); Pet. 29, 39-40, 48-53.



Pet. 10. Viewing station 150 displays and analyzes the sleep data. EX1008, 3:19-4:4 (“[A] viewing station for analysis ... the analysis being based upon ... computerised protocols.”); *see also* Pet., 52-53.

PO contends that Orbach's cellular phone 120 does not transmit sleep data ***“over cell towers to the computer or the second processor”*** because remote server

140 (and not a cell tower) sends sleep data to viewing station 150. POR, 5-9. PO apparently imposes a direct connection between cell towers and a computer or second processor, which is incorrect. *Id.*; *see supra* § II.C.

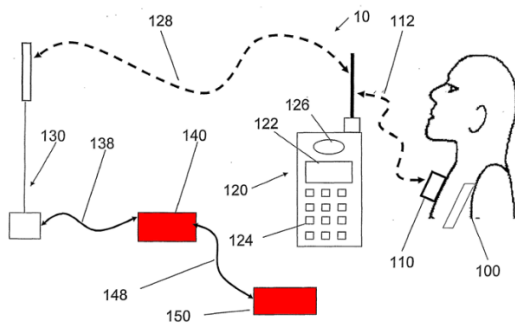
PO misses that Orbach's remote server and viewing station together constitute ***"a computer or a second processor at one or more sites."*** This is the case because a computer refers to one or more computers (or devices) at one or more sites, consistent with Claim 1's limitation that a computer can be ***"at one or more sites."*** *Supra* § II.A; Pet., 48-49. Moreover, the Petition established that software running on Orbach's viewing station 150 is configured to ***"analyze"*** and ***"display"*** sleep data as claimed. Pet., 48-52. PO does not dispute this, POR, 6-9, and has thus waived arguments otherwise. *Driessen*, 2023 WL 2422441, at *3. PO's remaining arguments regarding Orbach's server 140 and viewing station 150 also prove unavailing.

A. Orbach's remote server 140 and viewing station 150 constitute "a computer or a second processor at one or more sites" that analyzes and displays sleep data as claimed.

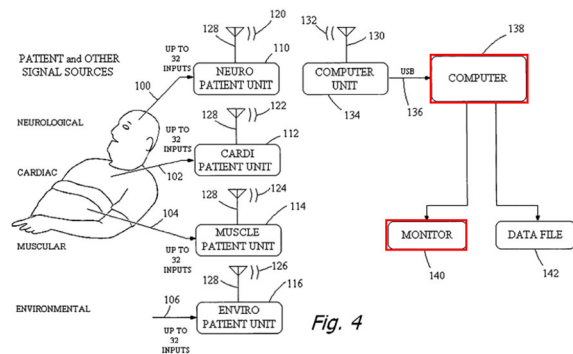
The POR incorrectly limits the claimed ***"computer...at one or more sites"*** to only Orbach's viewing station 150 ***or*** remote server 140. *See* POR, 6 ("remote server and viewing station ... are both computers"), ("[T]wo different computers execute their own distinct software"). The Petition, rather, identified Orbach's viewing station 150, remote server 140, or a combination of 150 and 140 as the claimed

“*computer*,” which is at “*one or more sites*.” Pet., 48 (“remote server with a viewing station (either being the *computer*)”); *id.* at 49 (“remote sensor [sic], viewing station, and second processor (*computer* ...)”); *see also id.* at 50 (“remote server, viewing station, or processor (*the computer or the second processor*)”); *id.* at 51 (remote server, viewing station, and processor (*computer or second processor*)”); at 52 (same); *id.* at 53 (same).

Orbach's remote server 140 and viewing station 150 together constitute “*a computer or a second processor at one or more sites*.” “[*A*] *computer*,” as claimed, refers to one or more computers at one or more sites. *Supra* § II.A. As shown below, Orbach's disclosure parallels the '512 Patent in which the combination of computer 138 connected to monitor 140 receives, analyzes, and displays the sleep data. *See* Pet. 48-54; POR 5-9.



EX1008, FIG. 1 (140, 150 in red)



EX1001, Fig. 4 (138, 140 in red)

Moreover, PO admits that 140 and 150 are computers, which falls within the scope of the claim. *See* POR, 6 (“remote server and viewing station ... are both

computers”). PO tries to distance itself from this conclusion by stressing an embodiment where 140 and 150 couple together via a generic Internet connection. POR, 6-7. But this argument ignores that a computer can include different devices at one or more sites, and that 140 and 150 function together and can alternatively connect via a “Local Area Network.” EX1008, 13:28-14:2; Pet., 48-49; *see also* EX1001, 18:27-29, Fig. 2 (describing microcontroller with two processors).

PO's contention that a POSITA “would [not] have combined different server and viewing station embodiment components” of Orbach, POR, 6, 8, likewise premises itself on an incorrect construction of “a computer” as a single computer, which cannot be the case. *Supra* § II.A. Petitioner applied the correct construction of a computer at one or more sites, and not PO's narrow construction. POR, 8-9; Pet., 48-53.

Further, Orbach discloses a cell phone that transmits sleep data “***over cell towers to the computer or the second processor***” at “***one or more sites,***” *i.e.*, remote server 140 and viewing station 150, “***for analysis.***” *E.g.*, Pet., 48-49. PO does not dispute that software running on Orbach's cell phone transmits sleep data “***over cell towers to the***” remote server 140 (***computer***) for Claim 1. POR, 6-9 (conceding “Orbach's describes [sic] a configuration in which the ***remote server*** receives data from a cell phone and retransmits the data,” but contending that the viewing station does not do so). Ciulla (EX1007) in view of Orbach teaches or suggests the claimed

configuration identified in the Petition. *See, e.g.*, Pet., 48-52; EX1008, 13:21-14:2 (“[A] communication link 128 ... connect[s] the mobile monitor 120 to a remote server 140 [D]ata link 148 ... connects the remote server 140 to a viewing station 150 ...”), 41:25-27 (“[T]he system may be used to record physiological reading while the user is sleeping ...”). And PO waived any argument otherwise. *See, e.g., Integrated DNA Techs., Inc. v. Pillar Biosciences, Inc.*, No. 2022-2172, 2024 WL 5182912, at *5 (Fed. Cir. Dec. 20, 2024) (affirming patent owner waived argument not briefed in patent owner response).

PO's POR likewise does not dispute that software running on Orbach's viewing station 150, which is part of Orbach's “*computer*” or “*second processor*” “*at one or more sites*,” is configured to “*analyze ... and/or format the sleep data*” and “*display ... the sleep data to allow for diagnosis of a sleep disorder and, if necessary, provide a basis to modify a sleep treatment of the subject.*” *See* POR, 6-9 (“[F]or analysis and display of data, Petitioner turns to Orbach's *viewing station*.... However, the viewing station computer ... does not receive data from a cell phone ... over cell towers.”). Ciulla-Orbach teaches or suggests this configuration identified in the Petition. *See, e.g.*, Pet., 48-54. PO waived any argument otherwise. *See, e.g., Integrated DNA*, 2024 WL 5182912, at *5.

B. Orbach discloses transmitting sleep data to a remote server 140 computer and analyzing and displaying that data at the processor of viewing station 150 as claimed.

PO incorrectly disregards that Claim 1 specifies, among other configurations, that software of a “*second processor*” can “*analyze*” and “*display*” sleep data as claimed if a “*computer*” re-transmits the sleep data sent via cell towers for analysis by the “*second processor*.” *Supra* § II.B. Orbach also discloses this configuration. Pet., 48-54. Remote server 140 (which PO admits is a “*computer*”) transmits sleep data received over cell towers for analysis. *Supra* § III.A. Viewing station 150 analyzes and displays the transmitted data. *Id.* And Orbach further discloses, as discussed in the Petition, that viewing station 150 includes a “*second processor*” for performing the claimed analysis and display functions. Pet., 48-54; EX1008, 3:19-4:4 (“a viewing station having a second processor ... viewing station for analysis ... the analysis being based upon ... computerised protocols”).

C. Orbach’s viewing station 150 is a computer or second processor like that claimed.

PO incorrectly contends that a system only transmits sleep data “*over cell towers to the computer*” if the computer and cell towers have a direct connection; a system that transmits sleep data “*over cell towers to the computer*” via an intervening network component (*e.g.*, a server or router) falls outside the scope of the claim according to PO. *See* POR, 6-9. PO’s argument falls short because Claim 1 is not limited to a direct cell phone-computer communication. *Supra* § II.C (communicating “*over cell towers to the computer*” includes from cell towers to the

remote computer destination, with or without an intervening router, etc., as long as data is sent over cell towers to a destination computer).

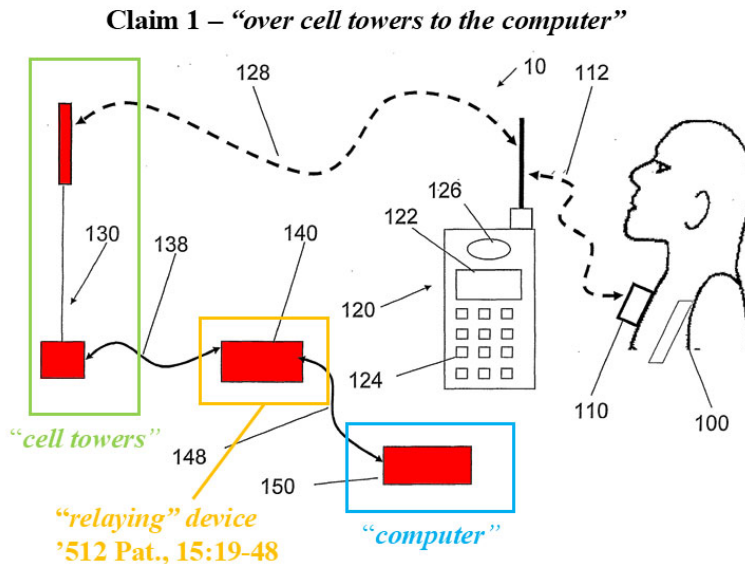
Orbach discloses a cell phone that sends sleep data “*over cell towers to the*” viewing station 150 “*computer*” using a relaying device (remote server 140) as claimed. EX1008, 13:21-14:2 (“[A] communication link 128 ... connect[s] the mobile monitor 120 to a remote server 140 [C]ommunication link 128 is a cellular RF link to a cellular base station 130 which is linked to a remote server 140 [D]ata link 148 ... connects the remote server 140 to a viewing station 150 where a human expert may provide interpretation of the data”), 41:25-27 (“[T]he system may be used to record physiological reading while the user is sleeping”); *e.g.*, Pet., 29, 39-40, 48-52.³ PO admits as much. POR, 6-7.

Although PO correctly identifies that Orbach's computer at a remote site can receive the transmission from the cell phone directly, PO disregards—in the only portion of the '512 Patent description that mentions “cell towers”—that the “computer” can also receive cell tower data from a “*communications device for relaying* the transmission” or an intervening “*communications device*” that first “re-

³ The POR does not contest Petitioner's analysis that it would have been obvious for Orbach's cell phone to communicate “*over cell towers*” to the extent not explicitly disclosed. POR; Pet., 13.

process[es] the transmission then *relay[s] it.*" EX1001, 15:15-48; *supra* § II.C.

Orbach squarely discloses the same configuration. Pet., 49-54.



EX1008, FIG. 1 (annotated).

Orbach’s viewing station 150 also analyzes and displays the sleep data as claimed and discussed previously. *Supra* § III.A. Thus, viewing station 150 performs the computer and second processor limitations of Claim 1.

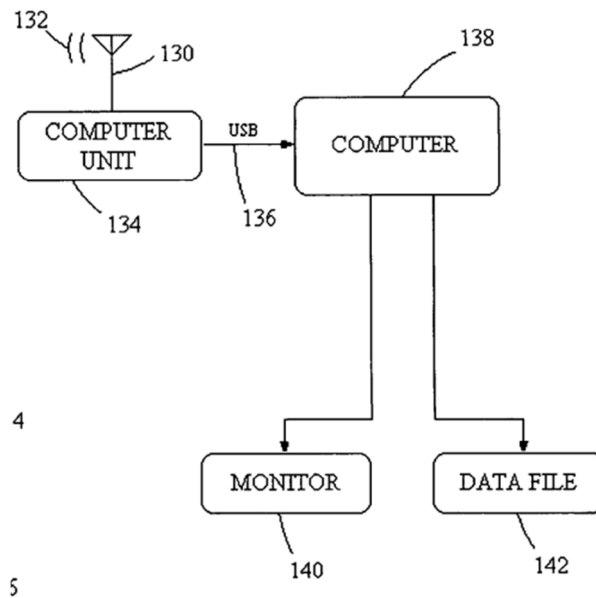
D. Orbach’s remote server 140 is a computer or second processor like that claimed.

PO misreads claim 1 by arguing that Orbach’s remote server 140 software is not configured to analyze and display sleep data because the viewing station 150 does. *See* POR, 7. But Claim 1 specifies that “*second software*” on the device is “*configured to analyze, output and/or format sleep data*” and “*display*” it—a configuration that encompasses software that drives, transmits, or otherwise outputs

data for display on the device's screen or a connected viewing station. EX1001, 21:4-7, 21:15-25; EX1005 ¶¶ 176-178; Pet., 52-54.

Orbach's remote server 140 software is configured to analyze and display sleep data as claimed. “[S]econd software” running on the remote server 140 “analyze[s]” sleep data. Pet., 48-54; *supra* § III.A. It also is configured to “display” the sleep data because it outputs the sleep data on viewing station 150. Pet., 48-54. This is the case because software does not itself “display” data, but is configured to display data by driving appropriate display hardware. EX1005 ¶¶ 176-178; Pet., 52-54. So viewing station 150 displays data, and Orbach's “second software when executed by the second processor or the computer” (remote server 140) is “configured to display ... the sleep data” by providing the data and appropriate control to the viewing station 150. Pet., 48-54.

The '512 Patent specification discloses the same configuration. For instance, the '512 Patent discloses that software on computer 138 is configured to display data by outputting it to external monitor 140, like that claimed. EX1001, 19:40-60.



Id. at FIG. 4.

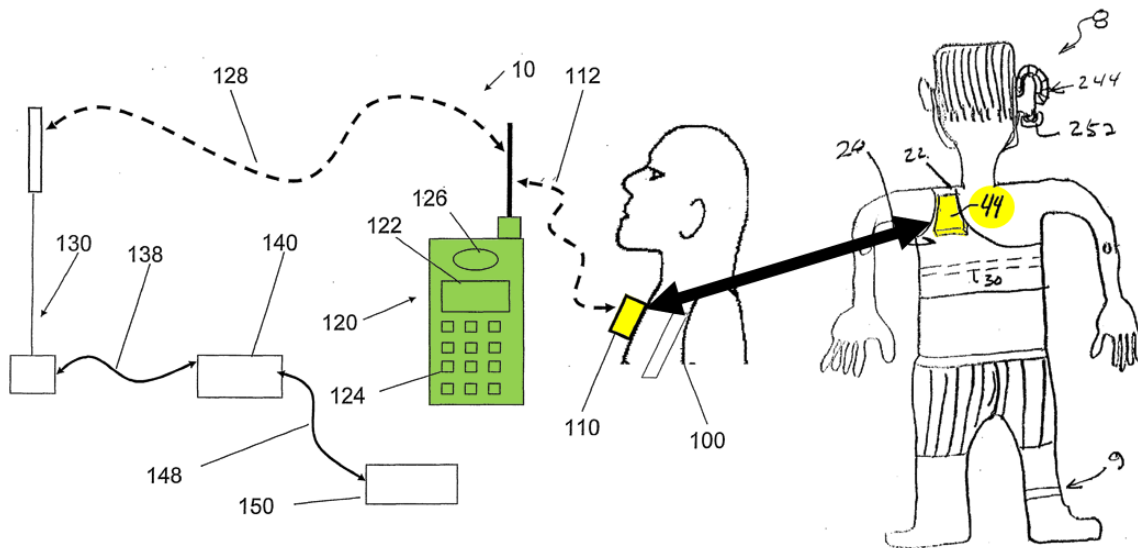
Although PO stresses that Orbach's remote server 140 can connect to viewing station 150 via an "Internet" or "WAN" connection, POR, 6-7, PO overlooks that remote server 140 can connect to viewing station 150 via a "Local Area Network." EX1008, 13:28-14:2. The '512 Patent contemplates a similar local connection between computer 138 and monitor 140, and further discloses that a computer, as a remote communication station, can "relay" the sleep data to another monitor. EX1001, 15:15-16:2, 19:40-60, FIG. 4. No compelling reason exists to read out the '512 Patent's descriptions of software executing on a first device that uses external monitor hardware to display and analyze data from Claim 1. *Oatey*, 514 F.3d at 1276; *Google*, 92 F.4th at 1058.

Orbach's cell phone transmits sleep data over cell towers to remote server 140

as claimed and as discussed previously. *Supra* § III.A. Thus, remote server 140 alone also performs the computer and second processor limitations of Claim 1.

IV. A POSITA WOULD HAVE HAD AMPLE REASON TO USE ORBACH'S CELL PHONE COMMUNICATION TECHNIQUES TO TRANSMIT CIULLA'S SLEEP DATA

PO contends that it would not have been obvious to modify Ciulla's main module 44 to transmit sleep data using a cell phone as taught by Orbach. POR, 10-14. Ciulla's main module 44 is illustrated in yellow; Orbach's sleep sensor 110 is illustrated in yellow and its cell phone 120 is illustrated in green.



Pet. 10. Petitioner maintains the modification would have been obvious.

First, PO's main argument that a POSITA would not have had a motivation to combine Ciulla and Orbach because both references address a "problem" related to real-time data communication and patient engagement misunderstands the law. *See* POR, 10-13 ("Petitioner's rationale, i.e. real-time data ... and patient

engagement, is predicated on solving a problem that does not exist in Ciulla.”). That two references address the same problem and use different ways to solve it is precisely the reason that a motivation to combine exists. *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1379-81 (Fed. Cir. 2023) (“Kabemoto and Bauman [prior art references] **address the same problem** and that Bauman’s cache was a known way to address that problem **is precisely the reason that there’s a motivation to combine....**”); *see also United Servs. Auto. Ass’n v. PNC Bank N.A.*, No. 2023-2171, 2025 WL 339662, at *4-5 (Fed. Cir. Jan. 30, 2025) (finding cell phone implementation obvious when “[b]oth references involve[d] remote check deposit technology”); *Maxell, Ltd. v. Amperex Tech. Ltd.*, No. 2023-2256, 2025 WL 271614, at *4 (Fed. Cir. Jan. 23, 2025) (“[T]he argument that ... the references use different means to solve the same problem would have disincentivized combination misses the mark.”).

That Ciulla and Orbach address similar sleep data communication problems, but use different means to communicate, indicates that a POSITA would have had a motivation to combine Ciulla with Orbach. *See Intel Corp.*, 61 F.4th at 1379-81; *see, e.g.*, EX1003 ¶¶ 107-112, 118-121; EX1005 ¶¶ 73-86. PO stresses that Ciulla discloses ways to address problems with communicating sleep data in “real-time” to “track” and “report” health data and to enhance “patient engagement.” POR, 10-13. PO also acknowledges that Ciulla generically teaches that its system can transmit

multiple sensors' outputs wirelessly via "WAN" (wide area network). POR, 2; EX1007, [0213]. Yet Ciulla does not delineate precisely the communication technology. EX1007. Incorporating Orbach's cell phone for Ciulla's data communication would have been a known, beneficial, and predictable way to address problems relating to real-time health data communication and increasing patient engagement. Pet., 10-13, 16-19; EX1003 ¶¶ 108-111; EX1005 ¶¶ 73-81, 86. And using a cell phone to communicate the sleep data was a known means to address such communication problems. *Id.*; EX1008, 13:14-14:2, 41:25-27 ("[T]he system may be used to record physiological reading while the user is sleeping"). It thus would have been an obvious modification. *See Intel Corp.*, 61 F.4th at 1379-81.

Moreover, PO also ignores that "if a technique has been used to improve one device, and ... it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond [a POSITA's] skill." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). The Petition also met this standard. Pet., 10-13 ("[a] user would not need a costly custom device...relevant software would easily be downloaded to the mobile device.... promoted greater patient engagement"), 16-19; EX1003 ¶¶ 108-111, 118-121; EX1005 ¶¶ 73-86 ("implementing them wirelessly was well within the skill set of a person of ordinary skill in the art").

In addition to Orbach, additional prior art references disclose using cell phones to improve biological data communications, a then-known technique used to improve data monitoring devices like that disclosed by Ciulla. Pet., 17 (citing Exs. 1009, 1045). PO has not—and cannot—show that implementing cell-phone-based communication in Ciulla's system would have been beyond the skill of a POSITA, which was a desirable configuration. *Honeywell Int'l Inc. v. 3G Licensing, S.A.*, 124 F.4th 1345, 1356 (Fed. Cir. 2025) (proposed combination need not be the “best”—only desirable “in light of the prior art”); *see, e.g.*, EX1003 ¶¶ 118-121; EX1005 ¶ 85.

Ciulla moreover discloses that its device “can be modified to add additional outputs and additional reporting capabilities to better adapt the device,” and Orbach's cell phone addition was a known and applicable output technique. EX1007, [0213]; Pet., 6, 16-17. PO overlooks this passage in Ciulla, instead quoting the “WAN” teachings of that paragraph without citing the “add additional outputs” language. POR, 2. Regardless, the passage confirms a POSITA would have had a reasonable expectation of success in implementing a cell phone output in Ciulla. Pet., 16-18; EX1003 ¶ 119.

Second, PO misunderstands several factual reasons justifying the combination of Ciulla and Orbach. PO notes that Ciulla discloses using an LCD display to promote healthy habits, POR, 11-12, but ignores that cell phone application windows

like those disclosed by Orbach would have further enhanced engagement in a similar but different way—offering convenience and familiarity. Pet., 12; EX1003 ¶¶ 107-113; EX1005 ¶¶ 72-81.

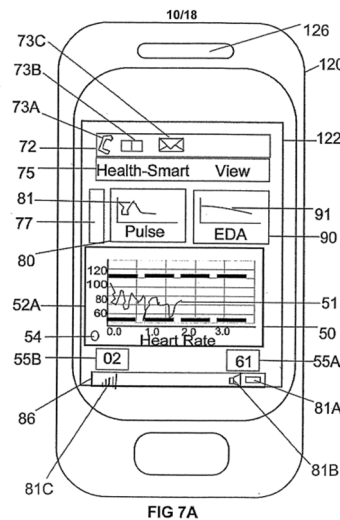


FIG. 7A

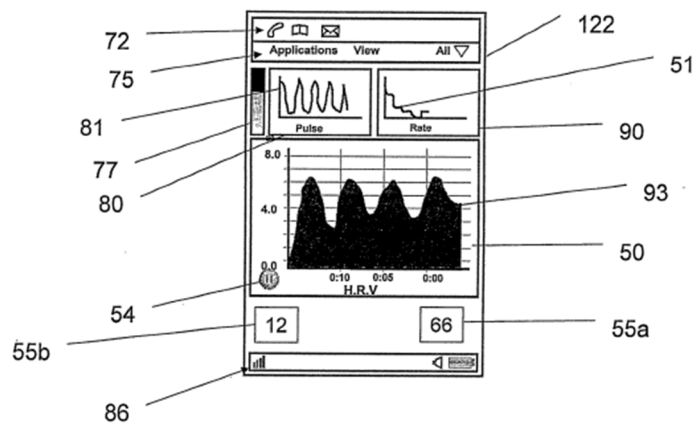


Fig. 7d

EX1008, FIGs. 7A, 7d; EX1003 ¶ 111. As the Petition explained, cell phone implementations “were increasingly popular and well-connected during the relevant time,” making such integration a logical and beneficial choice. Pet., 12; EX1003 ¶¶ 107-113; EX1005 ¶¶ 72-81. Simply disregarding this benefit of the combination does not establish nonobviousness. *See, e.g., Amneal Pharms., LLC & Par Pharm., Inc. v. Jazz Pharms., Inc.*, IPR2015-00545, Paper 69 at 34-36 (P.T.A.B. Jul. 27, 2016) (“Patent Owner does not address directly the cited ... motivation to combine [evidence] [A] POSA would have had ample motivation to combine ...”).

PO also fails to dispute the Petition's showing that adding a cell phone specifically to Ciulla's system would have offered tangible benefits over the generic

communication technology disclosed by Ciulla. A cell phone was a “common,” “well-connected,” and “cost”-effective platform, making it unnecessary to design or manufacture Ciulla’s specialized device 44 as a custom communication unit. Pet., 12; EX1003 ¶¶ 107-113; EX1005 ¶¶ 72-81. The Petition explained as much and that relevant software could simply be “downloaded” onto the patient’s existing mobile device—an advantage particularly significant given the rapid growth and connectivity of mobile platforms during the relevant period. Pet., 12; EX1003 ¶¶ 107-113; EX1005 ¶¶ 72-81. The POR fundamentally disregarded this additional rationale to combine. *See, e.g., Jazz Pharms., Inc.*, IPR2015-00545, Paper 69 at 34-36.

PO’s reliance on *Winner* and *Runway* is inapposite. *See* POR, 10-11 (citing *Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340 (Fed. Cir. 2000); *Runway Safe LLC v. Engineered Arresting Sys.*, IPR2015-01921, Paper 9 (P.T.A.B. Feb. 29, 2016)). In *Winner*, the Federal Circuit affirmed a finding of nonobviousness based on teaching away and secondary considerations—neither relevant here. Ciulla and Orbach are complementary, not contradictory. Pet., 16-18. Similarly, *Runway* turned on the absence of a problem justifying modification. *Runway*, IPR2015-01921, Paper 9, at 7. Here, both Ciulla and Orbach address known challenges in sleep disorder monitoring, offering compatible communication techniques. Pet., 10-13, 16-19; EX1003 ¶¶ 108-111; EX1005 ¶¶ 73-81, 86.

PO, ignoring benefits that would have motivated a POSITA to implement Orbach's configuration, instead argues that Ciulla has no "need" for such benefits because Ciulla discloses "PDA like functionality and a transmitter." *See* POR, 13-14. But the Petition did not need to prove that Ciulla's system "needed" a cell phone. Indeed, the Federal Circuit has squarely rejected such reasoning, explaining that error results when a modification is deemed nonobvious merely because it was "unnecessary." *Ethicon LLC v. Intuitive Surgical, Inc.*, No. 2020-1528, 2021 WL 3716397, at *7 (Fed. Cir. Aug. 23, 2021). Likewise, PO's suggestion that the combination would result in design tradeoffs and potential changes in Ciulla's "cost" or "complexity," POR, 13, does not confer nonobviousness. *Allied Erecting and Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) ("[A] given course of action often has simultaneous advantages and disadvantages....").

Here, Petitioner demonstrated that using a cell phone to transmit sleep data was known, beneficial, and, at minimum, a suitable option for replacing or adding to Ciulla's sleep data communication means. That showing, Pet., 9-15, confirms the combination would have been obvious, even if it was "unnecessary" as PO contends. *See Intel Corp.*, 61 F.4th at 1379-81 ("Intel just had to show that Bauman's secondary cache was a 'suitable option' to replace Kabemoto's secondary cache.").

V. CONCLUSION

The Board should find all challenged claims unpatentable.

Dated: December 9, 2025

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CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

I hereby certify that Petitioner's Reply to Patent Owner's Response complies with the word count limitation of 37 C.F.R. § 42.24(a)(1)(i) because the Reply contains a total of 5,555 words, calculated by Microsoft Word's word-count feature. This total excludes the cover page, signature block, and the parts of the Reply exempted by Rule 37 C.F.R. § 42.24(a)(1).

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CERTIFICATE OF SERVICE

The undersigned certifies that a complete copy of this **Petitioner's Reply to Patent Owner's Response** was served via electronic email on Patent Owner's counsel of record listed below on December 9, 2025:

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