



HERBERT SMITH
FREEHILLS
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PTAB Oral Argument

ResMed Corp.

v.

Cleveland Medical Devices, Inc.

March 19, 2026

Case No.: IPR2025-00158

Patent No.: 11,690,512

Kramer Levin is now HSF Kramer

IPR2025-00158 ('512 Patent) – Ground

Ground	Challenged Claims	35 U.S.C. §	References
I	1-6, 8-17, 19, 20	103	Ciulla & Orbach
II	1-6, 8-17, 19, 20	103	Ciulla, Orbach, & Nagai
III	7 and 18	103	Ciulla, Orbach, & Truschel
IV	6, 8, 13-14, 17, 19	103	Ciulla, Orbach, & Kumar
V	7 and 18	103	Ciulla, Orbach, Kumar, & Truschel

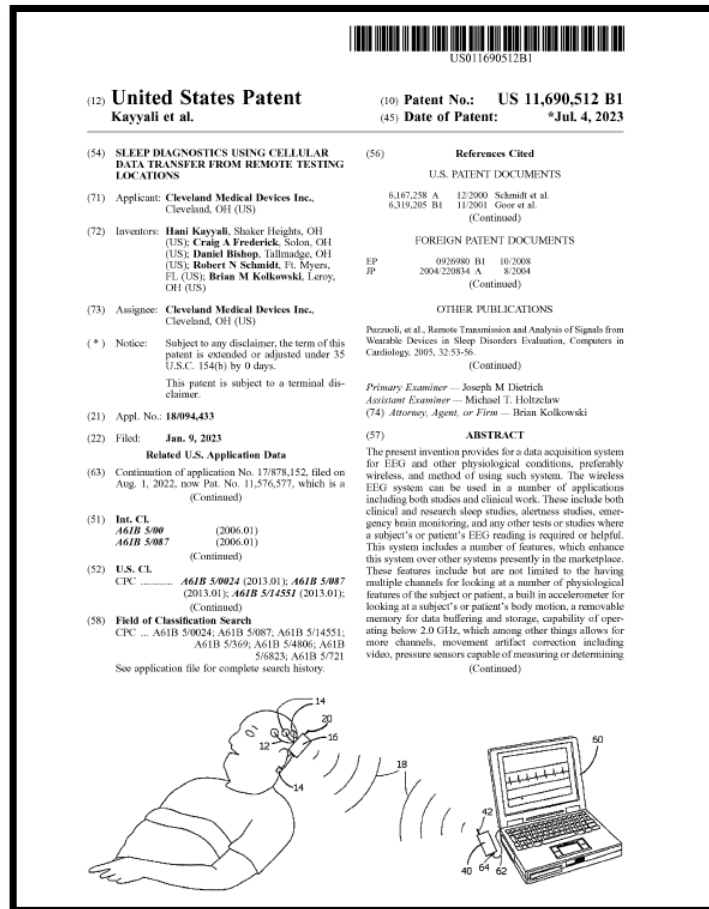
Summary of the Arguments

- The challenged claims of the '512 Patent are patentable because:
 - *Orbach* does not reveal any instance of a computer receiving sleep data via cell towers and executing the specified analysis and display functions.
 - A POSITA lacked motivation to combine Ciulla and Orbach, as Ciulla already addressed real-time communication, continuous data transmission, and patient engagement.

Overview of the '512 Patent



Overview of the '512 Patent



A portable sleep-diagnostic system that (i) acquires multi-sensor physiological sleep data via a wearable patient interface box, (ii) relays that data through a cell phone/PDA, and (iii) requires a single remote computer/processor executing second software to receive (over cell towers), analyze, and display the data for diagnosis and treatment decisions.

POR at 2-3; Ex. 1001

Overview of the '512 Patent: Claimed Software

First Software: 1[a] & 1[e]

- The “first software” is on a cell phone/PDA and receives data from the portable interface box and sends it “over cell towers” to a remote site.

- a) a first software stored on a non-transitory computer readable medium and executable by a first processor, the software configured to be loaded on a cell phone or Personal Digital Assistant (“PDA”) comprising at least one first wireless transceiver and the first processor;
- e) the first software, when executed by the first processor of the cell phone or PDA, configured to wirelessly receive and re-transmit the sleep data, or optionally send the sleep data further processed with the first processor of the cell phone or the PDA, with the at least one first wireless transceiver over cell towers to the computer or the second processor for analysis;

Second Software: 1[d], 1[f], & 1[g]

-The “second software” executed by “the computer or the second processor” at the remote site must analyze, output/format, and display the sleep data/analyzed data to enable diagnosis and treatment modification.

- d) an at least second software stored on a non-transitory computer readable medium and executable by a computer or a second processor at one or more sites remote to the first location;
- f) the second software when executed by the computer or the second processor configured to analyze, output and/or format the sleep data at the one or more sites remote from the first location where the sleep data was collected; and
- g) the at least second software, when executed by the second processor or the computer, configured to display both, in part, the sleep data and/or analyzed sleep data to allow for diagnosis of a sleep disorder and, if necessary, provide a basis to modify a sleep treatment of the subject.

POR at 5-7; Ex. 1001 at Claim 1



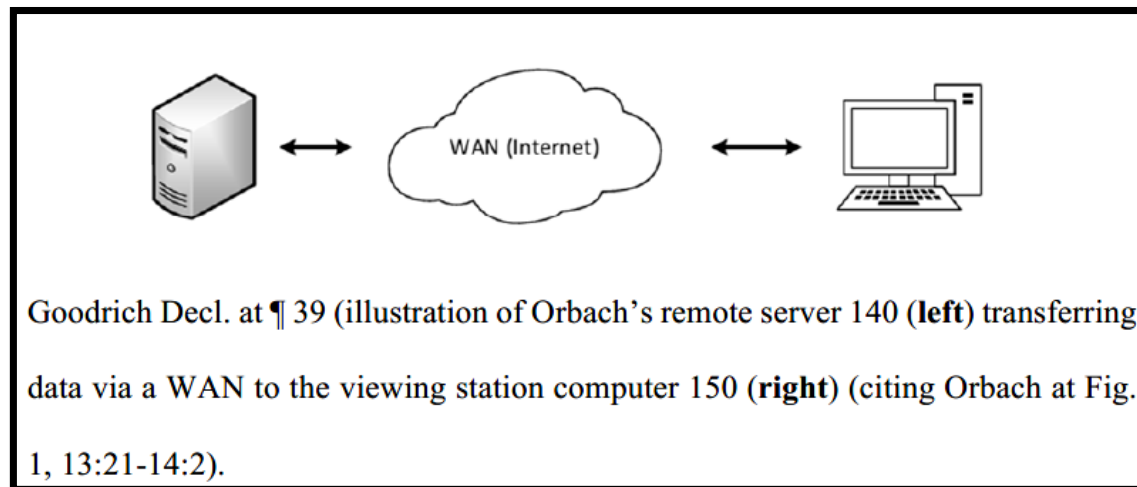
Grounds 1-6: Orbach Does Not Disclose the Second Software Limitations

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE



Orbach

Orbach discloses a remote server and viewing station, which are both computers that execute their own software with differing functionality.



- Neither computer executes second software directed to the analysis and display
- Neither computer receives sleep data over cell towers from a cell phone

POR at 3-9; Sur-Reply at 2-3, 9-14

Orbach's Computers

The Viewing Station Is Not a “Monitor”; It’s a Separate Computer with Its Own Processing Role

- The Petition itself describes the viewing station as having a processor and performing additional processing—not just display.
- Orbach teaches a remote call center / interactive expert system at the viewing station; that is computing, not passive monitoring –
 - “Viewing station 150 ... where a **human expert** may provide **interpretation** of the data and transmit recommendations to the user.” Ex. 1008 at 13:28-14:2
- Even under Petitioner’s framing, Orbach still has two separate computers executing different functions—not the solution Claim 1 requires.

POR at 3-9; Sur-Reply at 2-3, 9-14

The Reply's New Claim Constructions

ResMed belatedly advances three new claim constructions in Reply, so they can rewrite the claims to encompass Orbach:

- “a computer”
- “or”
- “direct”

merely a monitor. As ResMed argued in the Petition, the “viewing station” is a device with a “*second processor*” that “provide[s] additional processing” of received “sensor[] data.” Pet. at 48. As ResMed argued in the Petition, Orbach’s remote server 140 analyzes, formats, outputs sleep data and, *optionally*, transmits the data to viewing station 150, which displays the data to an expert. *Id.* at 52; Orbach at 13-14. Indeed, the viewing station 150 could not merely be a “monitor” and also act as “a remote call center [or] an interactive expert system,” as disclosed in Orbach. POR at 7 (citing Orbach at 8:13-15). Accordingly, Orbach’s viewing station is a “computer,” not merely a monitor that displays signals driven by the remote server. Pet. at 48 (“The remote server with a viewing station (*either being the computer*)....”) (emphasis added).

Sur-Reply at 2-3, 9-14

No Motivation To Combine Ciulla & Orbach

“There is a motivation to combine when a known technique ‘has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way.’” *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373 (Fed. Cir. 2023)

- Petitioner’s Motivations are already achieved by Ciulla:

- Continuous, real-time data
- Tracking and reporting
- Patient engagement

Because Petitioner’s rationale, *i.e.* real-time data, tracking and reporting health data, and patient engagement, is predicated on solving a problem that does not exist in Ciulla, there is no motivation to combine Orbach’s features with Ciulla.  Ciulla’s system offers these health data benefits as it includes features that provide continuous, real-time health data (*see* Ciulla, ¶ [0125]); generate messages to encourage the patient (¶¶ [0103], [0192]); and analyze and report health data (¶ [0192]). Goodrich Decl. at ¶ 48; Borkholder Decl. at ¶ 45.

POR at 10-14; Sur-Reply at 15-20

No Motivation To Combine For Continuous, Real-time Data

Ciulla's system includes an LCD screen that displays health data in real-time and messages of encouragement, therefore providing "continuous, real-time data communication" and "greater patient engagement" capabilities (Pet. at 12)

Declaration of Dr. Michael T. Goodrich
IPR2025-00158 (U.S. Patent No. 11,690,512)

The LCD display screen 62 may be similar to a PDA, insofar as the screen may be a touch screen so that the screen 62 also serves as an input device [T]he LCD display screen can include *things such messages of encouragement (good job)*, messages regarding the user's weight, along with various menu items (e.g. program outputs, *display results*).

Ciulla at ¶ [0103] (emphasis added).

[The] data [sic] could be reported *in real time and displayed in real time* at a location spatially removed from the main back module, such as in a room next door from the room in which the patient is sleeping.

Id. at ¶ [0125] (emphasis added), Fig. 3 (depicting the LCD screen as receiving data via a wireless data transmitter). Accordingly, Ciulla's LCD screen feature enables

POR at 10-12; Sur-Reply at 15-20; Ex. 2014 at paras. 44-49

No Motivation To Combine For Tracking And Reporting

Ciulla's system encompasses the monitoring and reporting of health data, as well as enhancing early detection of health problems—features that the Petitioner seeks from Orbach. (Pet. at 12)

 [0076] More importantly, the display screen can be used as a device for displaying reports to users and their medical practitioners relating to patient's sleep disorder. Example of such reports could include the patient's oxygen saturation

 [0214] AQ. In the preferred embodiment of the system the microprocessor will either store its analysis reports on a compact flash (SMART) card, or directly transmit these reports by IT to the therapist's computer and/or the company's main frame system for further analysis, research or documentation. If necessary, these reports can be transmitted to third party payers who want documentation of effectiveness or compliance with equipment use.

Ciulla:

- Produces and presents reports
- Saves and sends its reports
- Offers comprehensive monitoring, control, and analysis remotely

 [0230] BG. The system is designed to have its digital storage on a SMART card and/or uploaded wirelessly through a port, or any appropriate mode desired. Field reprogrammable chip technology is employed along with a microprocessor whose entire program can be conveniently altered as desired, and also have its voice chip, or its CASTs replaced, to increase the flexibility and adaptability of the device. The system is also designed to permit total monitoring, control and analyses to be performed in a different location from where the patient is sleeping by being capable of transmitting data it obtains at any distance, either wirelessly or by a modem.

POR at 12-14; Sur-Reply at 15-20; Ex. 2014 at paras. 50-52; Ex. 1007 at paras. 76, 214, 230

No Motivation To Combine For Patient Engagement

Ciulla includes the PDA functionality that Petitioner points to Orbach for.

Ciulla's system uses a cue and stimulus training CAST algorithms on its main module that are "programmed into the main processor (CPU) of the device for the CPU to use, as it ***will act like a PDA program.***"
Ex. 1007 at 139.

[0129] An important component of the present invention is the "CAST", that comprise the various treatment and stimuli regimes that are rendered to a patient. As will be discussed in more detail below, the CAST regimes have two primary purposes. The first primary purpose is to interrupt sleep disordered breathing events to prevent the sleep disordered breathing event from causing harm to the patient, such as by causing the patient to suffer from hypoxia.

[0130] The second primary purpose of the CAST regime is to provide operant and respondent conditioning to the patient to help condition the patient to both decrease the number of sleep disordered breathing events, and to decrease the severity of the sleep disordered breathing events that the user does encounter. Although various methodology behind the selection of the various sleep events within a particular CAST will be discussed in more detail below, three sample CAST's (cue and stimulus training regimes) will be discussed in connection with FIGS. 4a-4c.

POR at 10-15; Sur-Reply at 15-20; Ex. 2014 at paras. 50-52