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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STANISLAVA SORO, ROBERT F. DONEHOO,
and OTTO VALTTERI PEKANDER

Appeal 2019-002034
Application 15/703,633
Technology Center 2600

Before ADAM J. PYONIN, DAVID J. CUTITTA II, and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

CUTITTA, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 21, 25, 30, and 39.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as General Electric Company. Appeal Br. 1.

² Claims 1–20 are cancelled. *See* page 3 of Preliminary Amendment filed September 13, 2017.

CLAIMED SUBJECT MATTER

Invention

Appellant’s claimed subject matter relates to a “patient monitoring system [that] includes at least two wireless sensing devices, each wireless sensing device configured to measure a different physiological parameter from a patient.” Spec. ¶ 5.³ In the patent monitoring system, a monitoring regulation module “assign[s] one of the at least two wireless sensing devices as a dominant wireless sensing device and at least one of the remaining wireless sensing devices as a subordinate wireless sensing device.” *Id.* The subordinate wireless sensing device is then operated based on [a] stability indicator for the key parameter.” *Id.* “[B]attery demand for each wireless sensing device, and thus power requirements for the system as a whole, are decreased by selectively and intelligently operating one or more of the wireless sensing devices on an infrequent basis when the patient’s condition is stable and continuous patient monitoring is unnecessary.” *Id.* at ¶ 15.

Exemplary Claim

Claims 21, 30, and 39 are independent. Claim 21, reproduced below with limitations at issue italicized, exemplifies the claimed subject matter:

21. A patient monitoring system comprising:

at least two wireless sensing devices, each wireless sensing device configured to measure a different physiological parameter from a patient and wirelessly transmit a parameter dataset;

³ We refer to: (1) the originally filed Specification filed September 13, 2017 (“Spec.”); (2) the Final Office Action mailed February 22, 2018 (“Final Act.”); (3) the Appeal Brief filed September 17, 2018 (“Appeal Br.”); (4) the Examiner’s Answer mailed November 2, 2018 (“Ans.”); and (3) the Reply Brief filed December 28, 2018 (“Reply Br.”).

a receiver that receives each parameter dataset from each of the at least two wireless sensing devices;

a processor;

a monitoring regulation module executable on the processor to:

assign one of the at least two wireless sensing devices as a dominant wireless sensing device and at least one of the remaining wireless sensing devices as a subordinate wireless sensing device, wherein the physiological parameter measured by the dominant wireless sensing device is a key parameter and the parameter dataset transmitted by the dominant wireless sensing device is a key parameter dataset;

determine a stability indicator for the key parameter based on the key parameter dataset from the dominant wireless sensing device; and

control a measurement operation of the subordinate wireless sensing device to selectively operate based on the stability indicator for the key parameter.

Appeal Br. 17 (Claims Appendix).

REFERENCES AND REJECTIONS

The Examiner rejects claims 21, 30, and 39 under 35 U.S.C. § 103 as unpatentable over the teachings of Burnes et al. (US 2014/0031787 A1, published Jan. 30, 2014) (“Burnes”). Final Act. 3–8.

The Examiner rejects claim 25⁴ under 35 U.S.C. § 103 as unpatentable over the combined teachings of Burnes and Roberts et al. (US 6,163,723, issued Dec. 19, 2000) (“Roberts”). Final Act. 8–9.

⁴ The Examiner indicates that claims 22–24, 26–29, 31–38, and 40 contain allowable subject matter. Final Act. 9.

OPINION

We review the appealed rejections for error based upon the issues identified by Appellant and in light of Appellant’s arguments and evidence. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2018). We disagree with Appellant that the Examiner erred and adopt as our own the findings and reasons set forth by the Examiner to the extent consistent with our analysis herein. We add the following primarily for emphasis.

The Examiner relies on Burnes to teach or suggest all of the limitations of claim 21 but finds that “Burn[e]s fails to [expressly] disclose that the system assign[s] one of the at least two wireless sensing devices as a dominant wireless sensing device and at least one of the remaining wireless sensing devices as a subordinate wireless sensing device.” Final Act. 4 (emphasis omitted). The Examiner finds that “Burn[e]s teaches that the system is implemented with a predetermined primary and secondary sensor units,” and it is inherent in Burnes that “the secondary sensor [105] is assigned to be ‘the dominant wireless sensor and the primary sensor [103] is assigned to be ‘the subordinate sensor.’” Final Act. 4–5; Ans. 5.

Appellant argues:

It is nonsensical to say that Burnes inherently discloses that the primary sensor 103 is assigned as a dominant sensing device, and thus inherently discloses the *assigning a dominant wireless sensing device claim element*, because the primary sensor 103 is relied on in the remainder of the rejection as disclosing the claimed subordinate sensing device. Likewise, it is nonsensical to say that Burnes inherently discloses assigning the secondary sensors 105 as subordinate sensing devices because the substantive rejection cites the secondary sensors 105 as disclosing the claimed *dominant wireless sensing device*.

Appeal Br. 8.

The Examiner responds by noting that the findings are not “based on the naming of the wireless sensing device in Burnes,” but instead are “based on the naming used in the current application to represent the sensor that provides the first parameter as the dominant sensor and the sensor that provides a parameter based on the first ‘dominant’ parameter as the subordinate sensors.” Ans. 4–5. The Examiner finds Burnes’ secondary sensor 105 “provides a first parameter” and Burnes’ primary sensor 103 “provides a second parameter based on the value of the first parameter” and that these sensors teach the dominant and subordinate wireless sensing devices in claim 21 because the “term ‘dominant’ and ‘subordinate’ are just names that represent the role of the sensors.” Ans. 5.

Appellant’s argument that Burnes does not teach a dominant and subordinate wireless sensing device is unpersuasive. “The question under [35 U.S.C. § 103] is not merely what the references expressly teach but what they would have **suggested** to one of ordinary skill in the art at the time the invention was made.” *Merck & Co. v. Biocraft Laboratories, Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) (emphasis added) (quoting *In re Lamberti*, 545 F.2d 747, 750 (Fed. Cir. 1976); *see also* MPEP § 2123. We agree with the Examiner’s finding that “since Burnes takes the measurement of the primary sensor 103 *based on* the data that results from the reading of the secondary sensor 105, the secondary sensor is assigned to be ‘the dominant wireless sensor and the primary sensor is assigned to be ‘the subordinate sensor.’” Ans. 5 (emphasis added). Moreover, Appellant fails to demonstrate that the primary and secondary sensors of Burnes’ diuretic administration system do not necessarily or inherently possess the characteristics of the claimed

dominant and subordinate wireless sensors. *See In re Best*, 562 F.2d 1252, 1255, (CCPA 1977) (“Whether the rejection is based on ‘inherency’” or “on ‘prima facie obviousness’ under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same.”) (footnote and citation omitted); MPEP § 2112(V). Accordingly, Appellant fails to show error in the Examiner’s finding that the sensors in Burnes act as dominant and subordinate sensors and therefore teach or at least suggest assigning a dominant and subordinate sensor, as recited in claim 21.

Next, Appellant argues “there is no discussion in Burnes regarding reliance on one sensing device (either primary sensor 103 or secondary sensor 105) as being dominant over the others for purposes of controlling the *measurement operations* of other subordinate sensing devices.” Appeal Br. 8. Instead, “Burnes discloses a system where all measurement devices are controlled independently, regardless of physiological values measured by the others.” *Id.*

Appellant’s argument fails to demonstrate error in the Examiner’s finding that because “Burnes takes the measurement of the primary sensor 103 based on the data that results from the reading of the secondary sensor 105,” therefore “[t]he reading of the primary sensor 103 relies on the value of the parameter from the secondary sensor 105.” Ans. 6 (citing Burnes Fig. 10); Final Act. 4–5. In describing Figure 10, Burnes states, “[i]f the patient’s blood pressure is below the threshold, then the control system 8 continues to step 908 where the creatinine of the patient is checked.” Burnes ¶ 179. Furthermore, Figure 10 of Burnes illustrates that blood pressure is checked with a first sensor at step 906, and if the blood pressure is determined to be low, then creatinine is checked with a second sensor at step

908 *based on* the low blood pressure reading. We therefore agree with the Examiner’s finding that “Burnes teaches a system and method wherein based on a blood pressure reading from a first sensor [secondary sensor 105] [fig. 10, step 906], secondary [sic] [*recte* primary] sensor 103, check[s] a creatinine of a patient [fig. 10, step 908] as described in [par. 179, 183].” Ans. 4; *see* Burnes ¶ 140, 141. Moreover, because Burnes’ primary sensor 103 only checks creatinine levels based on a low blood pressure reading by secondary sensor 105, we agree with the Examiner that Burnes’ secondary sensor 105 teaches a dominant sensor and Burnes’ primary sensor 103 teaches a subordinate wireless sensor. Final Act 3; Ans. 4–5. As the Examiner correctly notes (Ans. 6), this interpretation of dominant and subordinate is consistent with Appellant’s Specification, which discloses that “[t]he subordinate wireless sensing device is then operated *based on* the stability indicator for the key parameter” obtained from the from the dominant wireless sensing device. Spec. ¶ 5 (emphasis added). Similarly, Burnes’ primary sensor 103 checks creatinine levels based on a low blood pressure reading by secondary sensor 105. Burnes ¶ 179, Fig. 10. Appellant’s argument (Appeal Br. 10) that “‘**reading**’ (in the sense of **using** the physiological data within the control logic for administration of the diuretic) is not the same as, and does not disclose, *controlling the measurement operation* of the subordinate sensing device,” is unpersuasive because it fails to address the Examiner’s finding that Burnes’ secondary sensor 105 controls primary sensor 103 by causing primary sensor 103 to check creatinine levels in response to a low blood pressure reading by secondary sensor 105 (Ans. 4).

Next, Appellant argues Burnes does not teach a sensor dominant over other subordinate sensing devices for purposes of controlling the measurement operations of the other devices because step 908 of Figure 10 does not teach using *a device* to check creatinine levels. Specifically, Appellant argues the Examiner “misinterprets Figure 10 as disclosing a wireless sensing device that performs the creatinine check because the “‘creatinine check (external reading)’ is referring to input of creatinine levels from a blood test performed outside of the system.” Appeal Br. 11; Reply Br. 2.

We find this argument unpersuasive because we agree with the Examiner’s finding that Burnes teaches using a *sensor* device to determine creatinine levels. Ans. 8. For example, Burnes discloses that “the primary sensor 103 can be a device that can automatically determine urea or creatinine concentrations and provide an estimate of GFR.” Burnes ¶ 140. Accordingly, one skilled in the art would have understood based on the combined teachings of Burnes that either sensor 103 or external data may be used to check creatinine levels at step 908 of Figure 10 of Burnes. Appellant’s argument (Appeal Br. 12) that Burnes “explain[s] that ‘[t]he primary sensor data can be supplemented with additional data that provides an indication of kidney function’” and that “‘**[k]idney function parameters . . . can be determined through standard laboratory tests and inputted by a patient,**’” does not address the Examiner’s finding that Burnes’ primary sensor 103 also may be used to measure creatinine levels. Ans. 8 (citing ¶ 140). As the Examiner notes, “[t]he office action is not relying on the embodiment described in [par. 156] of Burnes” rather the “action is relying on the teaching of [par. 140] which describes that ‘the primary

sensor 103 can be a device that can *automatically determine . . . creatinine concentrations*” (Ans. 8).

Based on our analysis above, we agree with the Examiner that Burnes’ “primary sensor 103 relies on the value of the parameter from the secondary sensor 105.” As a result, Burnes’ primary sensor 103 teaches or suggests the claimed subordinate wireless sensor and secondary sensor 105 teaches the claimed dominant wireless sensing device as recited in claim 21.

Appellant next argues that Burnes does not “disclose determining a stability indicator based on the key parameter dataset, and instead disclose[s], in relevant part, simply comparing the blood pressure value to a threshold.” Appeal Br. 13 (citing Burnes ¶¶ 32, 45, 169, 179, Figs. 8, 9).

The Examiner responds

The office action is interpreting the blood pressure data in relation to a threshold to read on the claimed “stability indicator”, as is made apparent from claim 25 further restricting what the claimed “stability indicator” as the reading of the dominant wireless sensing device in relation to a predetermined range. Based on the stability indicator, the system determines if data from another sensor, primary sensor 103, needs to be measured, which reads on the claimed “*controls a subordinate wireless sensing device based on a stability indicator.*”

Ans. 9.

Appellant does not persuasively challenge the Examiner’s articulated reasoning and findings found at page 9 of the Answer. We see no error in the Examiner’s finding that a low blood pressure (“BP”) reading determined by comparing the BP reading to a BP threshold in Burnes teaches or suggests a stability indicator because low blood pressure can be an indicator of patient stability or instability. See Burnes ¶ 162 (determining “if BP has

reached a critically low level”). Moreover, Appellant fails to show that the Examiner’s interpretation of a stability indicator as a threshold is inconsistent with Appellant’s Specification. *See, e.g.*, Spec. ¶ 28 (“For example, if the stability indicator for the key parameter is within a range that can be considered ‘stable’, then the patient condition is assumed to be stable.”). We, therefore, find the argument unpersuasive.

For the reasons discussed, Appellant has not persuaded us of error in the Examiner’s obviousness rejection of independent claim 21. Accordingly, we sustain the Examiner’s rejection of that claim, as well as the rejection of independent claims 30 and 39, and dependent claim 25, which Appellant does not argue separately with particularity. Appeal Br. 13–16.

CONCLUSION

We affirm the Examiner’s decision to reject claims 21, 25, 30, and 39 under 35 U.S.C. § 103.

DECISION SUMMARY

In summary:

| Claims Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed |
|------------------------|--------------------|---------------------------|-----------------|-----------------|
| 21, 30, 39 | 103 | Burnes | 21, 30, 39 | |
| 25 | 103 | Burnes, Roberts | 25 | |
| Overall Outcome | | | 21, 25, 30, 39 | |

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TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED