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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GUENTER GEGNER and SEBASTIAN HEBLER

Appeal 2018-000969
Application 14/001,679¹
Technology Center 3700

Before: CHARLES N. GREENHUT, FREDERICK C. LANEY, and
SEAN P. O’HANLON, *Administrative Patent Judges*.

GREENHUT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1–
24. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ According to Appellants, the real party in interest is Koninklijke
Philips Electronics N.V. (App. Br. 1).

CLAIMED SUBJECT MATTER

The claims are directed to a patient deterioration detection system.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A deterioration detection system for detecting deterioration of a patient of a medical institution, said system comprising:
 - one or more processors programmed to:
 - receive attended physiological data for a patient, the attended physiological data including measurements of a plurality of physiological parameters of the patient;
 - calculate a baseline patient score for the patient from the attended physiological data using a scoring table;
 - subsequently receive unattended physiological data for the patient, the unattended physiological data including measurements of the physiological parameters of the patient;
 - calculate a subsequent patient score for the patient from the subsequently received unattended physiological data using the scoring table;
 - compare the baseline and subsequent patient scores to determine any change in the patient score; and,
 - a notification device configured to notify a clinician of patient deterioration in response to a change in the patient score exceeding a threshold.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Jacobsen et al.	US 6,160,478	Dec. 12, 2000
Swedlow et al.	US 6,463,310 B1	Oct. 8, 2002
Booth et al.	US 2007/0276277 A1	Nov. 29, 2007
Hu et al.	US 2009/0093686 A1	Apr. 9, 2009
Martin et al.	US 2009/0216556 A1	Aug. 27, 2009
Tivig et al.	US 2009/0289799 A1	Nov. 26, 2009

EXAMINER'S REJECTIONS

Claims 1–24 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 1–24 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 2, 6–8, 10, 13, 16–19, 21, and 24 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hu.

Claims 3–5, 11, 12, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hu and Tivig.

Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hu and Jacobsen.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over and Martin.

Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hu, Martin, and Booth.

Claims 22 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hu, Booth, and Swedlow.

OPINION

§ 112

Although set forth under the first paragraph of § 112, the substance of the Examiner's rejection relates to a lack of claim clarity—an issue more appropriately addressed under the standards set forth in the second paragraph of § 112. Final Act. 2–3; Ans. 17–18; *see* MPEP §§ 2173, 2174. The issue raised by the Examiner relates to the meaning of the recited terms “attended” and “unattended.” Final Act. 2–3. The Examiner acknowledges (Ans. 17–18) the express definition of these terms in the Specification is:

Appeal 2018-000969
Application 14/001,679

“Attended vital signs are vital signs obtained with the supervision of a clinician, whereas unattended vital signs are vital signs obtained without the supervision of a clinician.” Spec. 1:27–29. However, the Examiner points out that the characterization of data as “attended” or “unattended” depends on the presence or absence of “supervision,” which itself is a term of degree. *See* Ans. 17–18 (“it is unclear what the level of supervision can mean. For example is a nurse being at a nurses station considered supervision? Does it require the clinician to be in the room when the data is gathered?”). There is nothing wrong, per se, with using a term of degree to define the metes and bounds of a claim’s scope. However, in such cases the specification should provide some standard for measuring the degree necessary to satisfy the claim language. *See* MPEP § 2173.05(b)(I) (citing, *inter alia*, *Seattle Box Co., Inc. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818 (Fed. Cir. 1984)). This is critical so as to reasonably inform the potential infringer as to the metes and bounds of the claim’s scope. *In re Hammack*, 427 F.2d 1378, 1382 (CCPA 1970). It is not clear on the record before us what degree of supervision or lack thereof is required to satisfy the claim terms “attended” and “unattended,” respectively. As, based on the Examiner’s explanation, the Examiner’s rejection appears to have been set forth under the incorrect paragraph of § 112, Appellants have not been afforded a full and fair opportunity to respond to the merits of this rejection. Accordingly, we modify the Examiner’s rejection under § 112, first paragraph, to be predicated on § 112, second paragraph, and in doing so designate this opinion as including a “new ground” of rejection under 37 C.F.R. § 41.50(b) so that Appellants may be afforded the procedural options to respond associated therewith.

An additional issue of claim clarity arises with regard to claim 18. A step of “receiving the deteriorated unattended physiological data” is recited in a “method for verifying deteriorated unattended physiological data.” Claim 18 subsequently recites steps to be followed, “in response to intermittently receiving the unattended physiological data. . .” Among those steps is “receiving supplemental unattended physiological data” and sub-steps that occur “in response to intermittently and/or continuously receiving unattended physiological data.” First, in regard to the “intermittently and/or continuously receiving” phrase, it is not clear how the same data can be both intermittently *and* continuously received. Second, both “unattended physiological data” and “supplemental unattended physiological data” are previously recited in the claim. It is not clear if the reference to “unattended physiological data” in this clause is intended to generically refer to either of the previously recited “unattended physiological data” or “supplemental unattended physiological data,” or if it was intended to refer only to the first “unattended physiological data.” Third, the “capturing measurements of at least one of the physiological parameters” clause presents a similar issue because it is unclear whether this refers to only the initially set forth “measurements of one or more physiological parameters,” or either of the “measurements of one or more physiological parameters” or the subsequently recited “additional measurements of at least one of the physiological parameters.” Fourth, the last clause adds to this confusion referring to “the measurements of the deteriorated unattended physiological data” when the claim previously recited only “measurements of one or more physiological parameters” and “additional measurements of at least one of the physiological parameters,” neither of which provide clear antecedent basis for “the measurements of the deteriorated unattended physiological

data” Fifth, the last clause also recites a comparison between these measurements and “corresponding measurements of the supplemental unattended physiological data” when no such measurements were previously recited as having been made according to the claim. It is not clear if this limitation was intended to introduce new measurements or demonstrates that the “supplemental” aspect was inadvertently omitted from one of the previously set forth measuring steps. For the foregoing reasons, we are unable to discern with sufficient certainty the scope of claim 18. Thus, in addition to the reasons discussed with regard to the attended/unattended language, we also reject claim 18 under 35 U.S.C. § 112, second paragraph for these additional reasons.

§§ 102 and 103 rejections based on Hu

With regard to independent claims 1, 7 and 20 the Examiner asserts without specific citation to supporting evidence that the temporal aspects of the claims are satisfied by the cited paragraphs of Hu. Final Act. 5 (citing Hu paras. 29, 31, 46, 61; figs. 2, 3); Ans. 18 (“Examiner has shown in the Office Action how [Hu] teaches this temporal order as shown on pages 5-6 of the Office Action”). We have carefully studied the cited portions of Hu and it is not apparent how the Examiner arrived at this conclusion. App. Br. 12–16. A rejection must be set forth in sufficiently articulate and informative manner as to meet the notice requirement of § 132, such as by identifying where or how each limitation of the rejected claims is met by the prior art references. *In re Jung*, 637 F. 3d 1356, 1363 (Fed. Cir. 2011); *see also* 37 C.F.R. § 1.104(c)(2) (“When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each

Appeal 2018-000969
Application 14/001,679

reference, if not apparent, must be clearly explained and each rejected claim specified.”); *Gechter v. Davidson* 116 F.3d 1454, 1460 (Fed. Cir. 1997) (PTO must create a record that includes “specific fact findings for each contested limitation and satisfactory explanations for such findings.”). The Examiner goes on to state that “Applicant provides no technical reason or functionality for the temporal order and thus the order is considered a design choice which is obvious to one of ordinary skill in the art.” Ans. 18. If fully developed, this type of reasoning may suffice to demonstrate unpatentability under 35 U.S.C. § 103(a). However, the Examiner’s reasoning in this regard is of no relevance to the question of anticipation under 35 U.S.C. § 102(b). Insofar as the rejection under 35 U.S.C. § 103(a) is concerned, the Examiner does not provide further evidence or reasoning to further develop this position or otherwise address this shortcoming in the § 102 rejection. “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), cited with approval in *KSR Int’l. v. Teleflex*, 550 U.S. 398, 418 (2007). For the foregoing reasons, the prior art rejections of claims 1, 7, and 20, and of those claims depending therefrom, cannot be sustained on the basis set forth by the Examiner.

Unlike claims 1, 7 and 20, claim 18 presents such significant issues related to indefiniteness that we are unable to render a definitive decision on the merits of the Examiner’s anticipation rejection against independent claim 18 (App. Br. 14–15), and its dependent claims 19 and 24, at this time. Before a proper review of the rejection under 35 U.S.C. § 102(b) can be performed, the subject matter encompassed by the claims on appeal must be reasonably

understood without resort to speculation. Since claim 18 fails to satisfy the requirements of the second paragraph of 35 U.S.C. § 112 we reverse the rejection under 35 U.S.C. § 102(b) without reaching the merits of that rejection at this time. *See, e.g., In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.).

§ 101

In arguing the § 101 rejection, sections S, T, V, and W of the brief argue aspects of claim 1. Section U argues claim 7 specifically. Appellants briefly point out what each of independent claims 1, 7, 18 and 20 recites in section R (App. Br. 25), and briefly point out what claim 23 recites in section S (App. Br. 27). We consider claims 1 and 7 as the only claims separately argued under 37 C.F.R. § 37(c)(1)(iv) and note that merely pointing out what a claim recites coupled with a general assertion the claim satisfies the statutory requirements does not suffice to amount to a separate argument for that claim under 37 C.F.R. § 37(c)(1)(iv). *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011).

Although, as discussed above, there is some uncertainty as to the scope of claims 1 and 7, the issues discussed above do not prevent us from generally agreeing with the Examiner that neither claim 1 nor claim 7, as presently set forth, defines statutorily eligible subject matter.² We address

² It is noted that the USPTO issued Revised Patent Subject Matter Eligibility Guidance (84 Fed. Reg. 50) on January 7, 2019 *available at* <https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf> (last visited Mar. 27, 2019)

only the issues raised by the Appellant concerning the Examiner's position.
See Ex Parte Frye, 94 USPQ2d 1072, 1075-76 (BPAI 2010).

As the Examiner correctly points out, claims 1 and 7 recite steps involved in the gathering of data,³ performing calculations on that data,⁴ and outputting the results of those calculations⁵. These calculations constitute mathematical concepts falling within the purview of abstract ideas held ineligible⁶ and gathering and outputting data in routine, generic, or

³ “receive attended physiological data for a patient”; “subsequently receive unattended physiological data for the patient”;

⁴ “calculate a baseline patient score for the patient from the attended physiological data using a scoring table”; “calculate a subsequent patient score for the patient from the subsequently received unattended physiological data using the scoring table”; “compare the baseline and subsequent patient scores to determine any change in the patient score”

⁵ “a notification device configured to notify a clinician of patient deterioration in response to a change in the patient score exceeding a threshold”

⁶ *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“The concept of hedging . . . reduced to a mathematical formula . . . is an unpatentable abstract idea[.]”); *Diamond v. Diehr*, 450 U.S. 175, 191 (1981) (“A mathematical formula as such is not accorded the protection of our patent laws’”) (citing *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)); *Parker v. Flook*, 437 U.S. 584, 594 (1978) (“[T]he discovery of [a mathematical formula] cannot support a patent unless there is some other inventive concept in its application.”); *Benson*, 409 U.S. at 71–72 (concluding that permitting a patent on the claimed invention “would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself”); *Mackay Radio & Telegraph Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939) (“[A] scientific truth, or the mathematical expression of it, is not patentable invention[.]”); *SAP America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018) (holding that claims to a “series of mathematical calculations based on selected information” are directed to abstract ideas); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (holding that claims to a “process of organizing information through mathematical correlations” are directed to an abstract idea); *Bancorp Servs., LLC v. Sun Life Assurance Co. of Can.* (U.S.), 687 F.3d 1266, 1280 (Fed.

Appeal 2018-000969
Application 14/001,679

conventional ways has repeatedly been held to be extra-solution activity that fails to remove the claim from the realm of the abstract. *See Electric Power Group, LLC v. Alstom, S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016).⁷

Appellants' alleged solution to the purported problem of unreliable unattended patient measurements (App. Br. 25; Spec. 1) is set forth only as a series of broad abstractions and therefore fails to integrate the purported solution into a practical application. The Examiner correctly points out that claims 1 and 7 before us are very similar to the claims held ineligible in *Electric Power*. Ans. 23–25. Appellants essentially dismiss the Examiner's position in this regard with very minimal analysis. *See Reply*. Br. 17.

Appellants' claim lacks the practical, specific, or particular application necessary to avoid preempting others from making well-known comparisons of data from well-known sources to accurately determine deterioration of the patient. *See, e.g., Electric Power* 830 F.3d at 1356. Turning to the data gathering and outputting steps, as discussed above, those do not provide an inventive concept amounting to significantly more than the judicial exception, the calculation, itself, Appellants' claim would improperly monopolize a healthcare provider's ability to compare deterioration data obtained through unattended means to that obtained when attended by a clinician. Comparing attended and unattended forms of patient physiological data is a basic and fundamental tool of providing healthcare. For these reasons, claims 1 and 7 fail to meet the standard for patent eligibility under § 101.

Cir. 2012) (identifying the concept of “managing a stable value protected life insurance policy by performing calculations and manipulating the results” as an abstract idea).

⁷ *See, e.g.*, MPEP §§ 2106.05(e), (g) and cases cited therein.

DECISION

The Examiner's rejection of claims 1–24 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement is reversed.

Pursuant to 37 C.F.R. § 41.50(b), we enter new grounds of rejection against claims 1–24 under 35 U.S.C. § 112, second paragraph.

The Examiner's rejection of claims 1–24 under 35 U.S.C. § 101 is affirmed.

The Examiner's prior-art rejections are reversed.

FINALITY OF DECISION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

Appeal 2018-000969
Application 14/001,679

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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).

AFFIRMED⁸; 37 C.F.R. § 41.50(b)

⁸ “The affirmance of the rejection of a claim on any of the grounds specified constitutes a general affirmance of the decision of the examiner on that claim, except as to any ground specifically reversed” 37 C.F.R. § 41.50(a).