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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ISRAEL BIRENBAUM, KEVIN RUBEY, and GAVRIEL MERON

Appeal 2016-005617
Application 12/951,267[1]
Technology Center 3600

Before KRISTEN L. DROESCH, CATHERINE SHIANG, and JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants file this appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3, 4, 6, 8–11, 14–17, 19–23, 25, 26, 30, and 31. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE CLAIMED INVENTION

Appellants' claimed invention "relates to colonoscopy, capsule endoscopy or other diagnosis[, and, i]n particular, it relates to compliance verification of colon preparation by a patient before diagnosis." Spec. 1.

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[1] According to Appellants, the real parties in interest are Given Imaging Ltd., Covidien Group S.a.r.1., and Covidien plc. App. Br. 1.

Claim 1 is illustrative of the subject matter of the appeal and is reproduced below.

> 1. A method for performing a medical examination procedure, the method comprising:
>
> receiving by a data processor, a set of instructions for the patient obtained using a software configuration tool, the instructions including instructions as to how to perform one or more activities relating to colon preparation and to colon examination procedures;
>
> using the data processor, displaying a first reminder to the patient to perform an instruction from the set of instructions, the first reminder being displayed on a screen of a colon preparation recorder;
>
> receiving, at the data processor, in response to the patient providing input to a user interface of the colon preparation recorder, patient input information input by the patient, wherein the patient input information is related to the patient performing an activity relating to colon preparation according to an instruction;
>
> detecting a landmark of the gastrointestinal tract, wherein the detection is based on automatic analysis of images recorded during the examination procedure;
>
> scheduling the instructions for the remainder of the procedure based on the detected landmark; and
>
> using the data processor, recording the patient input information, in a memory.

REJECTIONS ON APPEAL

(1) The Examiner rejected claims 1, 3, 4, 6, 8–11, 14–17, 19–23, 25, 26, 30, and 31 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

(2) The Examiner rejected claims 1, 3, 4, 6, 8–10, 14–16, 19, 20, 22, 30, and 31 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Bhavani et al. (US 2009/0315735 A1; published Dec. 24,

2009) (hereinafter "Bhavani") and Horn et al. (US 2006/0069317 A1; published Mar. 30, 2006) (hereinafter "Horn").

(3) The Examiner rejected claims 11, 17, 21, 23, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Bhavani, Horn, and Giftakis et al. (US 2009/0082641 A1; published Mar. 26, 2009) (hereinafter "Giftakis").

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' contentions that the Examiner erred. In reaching our decision, we consider all evidence presented and all arguments made by Appellants.

We disagree with Appellants' arguments and we incorporate herein and adopt as our own the findings, conclusions, and reasons set forth by the Examiner in the (1) April 27, 2015 Final Office Action ("Final Act." 2–24) and (2) March 2, 2016 Examiner's Answer ("Ans." 2–6). We highlight and address for emphasis, however, specific findings and arguments below relating to (1) statutory subject matter eligibility and (2) the art based rejections.

(1) Arguments relating to § 101 rejection

Appellants contend the Examiner improperly rejected claims 1, 3, 4, 6, 8–11, 14–17, 19–23, 25, 26, 30, and 31 under 35 U.S.C. § 101. *See* App. Br. 5–9; Reply Br. 2–5. As to the specific arguments we address below, Appellants argue the rejected claims as a group. Thus, we decide the appeal of the § 101 rejection on the basis of representative claim 1, and refer to the rejected claims collectively herein as "the claims." *See* 37 C.F.R. § 41.37(c)(1)(iv); *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

According to Appellants, the claims do not concern an abstract idea, and even if they did, the claims would be patent eligible because the claims amount to significantly more than an abstract idea. *See* App. Br. 5–9; Reply Br. 2–5. We find Appellants' arguments unpersuasive.

Section 101 of the Patent Act provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court has explained that this provision is subject to a long-standing, implicit exception: "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (quotation marks and citation omitted). The Court has set forth a two-part inquiry to determine whether this exception applies. First, we must determine if the claim at issue is directed to one of those patent-ineligible concepts. *Alice*, 134 S. Ct. at 2355. Second, if the claim is directed to one of those patent-ineligible concepts, we must consider the elements of the claim "both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quotation marks omitted) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72 (2012)).

(i) Abstract idea

We first consider whether the Examiner properly concluded the claims are directed to one or more abstract ideas. For example, the Examiner concluded that the claims on appeal "are disclosed at a level of generality that merely serve to provide[and] process the data," which is

similar to "'collecting and comparing known information'" which has been found to be an abstract idea under controlling case law. *See* Ans. 2–3 (citation omitted); *see also* Final Act. 2 (finding that the claims conceptually "are directed to the abstract idea of clinical decision support [and] clinical recommendations in response to patient data").

Appellants argue the claims are not directed to an abstract idea and do not explicitly recite clinical decision support (i.e., an abstract idea to which the Examiner finds the claims are directed). *See* App. Br. 6; Reply Br. 2. Appellants further argue the Examiner insufficiently ties the claim language to the abstract idea findings. App. Br. 6; *see also id.* (arguing the Office's 2014 Guidance requires the Examiner to identify where in the claim the abstract idea is recited).

Appellants have not persuaded us that the Examiner erred. The Federal Circuit has explained that the abstract-idea inquiry requires "looking at the 'focus' of the claims, their 'character as a whole,'" to determine if the claims are directed to an abstract idea. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (citations omitted). Claim 1 recites "[a] method for performing a medical examination procedure." App. Br. 16.

We agree with the Examiner that the claims are directed to an abstract idea of providing and processing data, which includes clinical decision support and clinical recommendations. In this regard, the claims of the instant application are similar to the claims in *Electric Power*, which did "not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that

are arguably an advance over conventional computer and network technology." 830 F.3d at 1351. Specifically, our reviewing Court held that "collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas" and treats "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *Id.* at 1353–54 (citations omitted).

The claims of the instant application also are similar to the claims in *SmartGene*, wherein the Federal Circuit found claims patent ineligible because they did "no more than call on a 'computing device,' with basic functionality for comparing stored and input data and rules, to do what doctors do routinely." *See SmartGene, Inc. v. Adv. Bio. Labs., SA*, 555 Fed. Appx. 950, 954 (Fed. Cir. 2014).

These cases are sufficiently analogous to establish that the instant claims are directed to an abstract idea. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (explaining that when determining whether claims are directed to an abstract idea, "both this court and the Supreme Court have found it sufficient to compare [the] claims at issue to those claims already found to be directed to an abstract idea in previous cases").

(ii) Inventive concept

We next consider whether the Examiner correctly concluded the claims do not include an "inventive concept—*i.e.,* an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept]

itself." *Alice*, 134 S. Ct. at 2355 (quotation marks omitted) (quoting *Mayo, Inc.*, 566 U.S. at 72–73). The Examiner explained the claims "do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the computer as recited is a generic computer . . . that performs . . . generic computer functions . . . that are well-understood, routine, and conventional activities previously known to the industry." Final Act. 2–3; *see also* Ans. 3.

Appellants argue the Examiner fails to comply with Patent Office Guidelines concerning subject matter eligibility, including failing to "identify the additional elements in the claim or explain why the additional elements do not amount to significantly more than the exception." App. Br. 7. Regardless, Appellants argue the claims, particularly when all claim elements are considered, "recite something significantly more than merely clinical decision support in response to patient data." App. Br. 7–8. Appellants argue, for example, that the claims provide a specific method relating to performing a medical examination procedure, in which "information is organized, not with a generic computer, but rather with a specialized instrument, the colon preparation recorder, which is adapted to receive image information from a capsule, and accept input, via a patient interface, from a patient undergoing the procedure." App. Br. 8.

We agree with the Examiner that the claims do not amount to significantly more than the abstract idea. Appellants fail to refute sufficiently the Examiner's finding, with which we agree, that the claims perform functions "that are well-understood, routine, and conventional activities previously known to the industry," rather than being an inventive concept. *See Ultramercial*, 772 F.3d at 716 (quotation marks omitted)

(quoting *Alice*, 134 S. Ct. at 2357) (finding using known elements to perform "conventional steps, specified at a high level of generality, [ ] is insufficient to supply an inventive concept"). Furthermore, the claims do not specify a special purpose computer (as Appellants argue the colon preparation recorder constitutes), but rather describe routine and conventional steps to be carried out by the equivalent of a generic computer (i.e., "apply it with a computer"), and, thus, fail to provide an inventive concept. *See Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015) (quoting *Alice*, 134 S. Ct. at 2358) (finding an inventive concept "requires more than simply stating an abstract idea while adding the words 'apply it' or 'apply it with a computer'"). The fact that a generic computer requires relevant programming does not change the programmed generic computer into a special purpose computer. *See id.*

We also are unpersuaded by Appellants' reliance on *Diamond v. Diehr*, 450 U.S. 175 (1981), which involved a transformative manufacturing process involving "constantly determining the temperature of the mold[and] constantly recalculating the appropriate cure time through the use of the [mathematical] formula." *See Diehr*, 450 U.S. at 187. Appellants have not provided persuasive evidence of any similar or sufficient transformative use.

For the above reasons, we sustain the Examiner's rejection of claims 1, 3, 4, 6, 8–11, 14–17, 19–23, 25, 26, 30, and 31 under 35 U.S.C. § 101.

(2) Arguments relating to § 103(a) rejections

(i) Patient input information

Appellants argue the combination of Bhavani and Horn fails to teach or suggest "receiving . . . in response to the patient providing input to a user interface . . . patient input information," as recited in independent claim 1 and commensurate in scope with independent claim 9. App. Br. 10. More specifically, Appellants argue Bhavani's teachings instead "pertain exclusively to patient flow management [(i.e., determining and tracking the patient's location in a facility and use of facility resources)] by medical staff, *without reference to the patient inputting information*." *Id.* (emphasis added); *see also* Reply Br. 6 (arguing Bhavani's "'user' is a hospital administrator, or the like–not a patient").

The Examiner finds the combination teaches or suggests the disputed limitation. Ans. 5; Final Act. 5. More specifically, the Examiner finds Bhavani teaches that "a user interface is provided that allows a user to enter information about the patient so that the information is received by a computer." Ans. 5 (citing Bhavani ¶¶ 7–10, 12, 32, 38); *id.* (quoting Bhavani ¶ 38) ("[T]he user interface allows a user to input a patient flow definition 130 and/or patient information 140 into the management computer."); *see also* Final Act. 5.

We find that the disputed limitation would have been obvious to one of ordinary skill in the art in light of Bhavani and Horn's teachings. We agree with the Examiner that the combined teachings teach or suggest that inputted patient information is received to manage a patient's care (e.g., tracking a patient's location or resource needs). *See* Bhavani ¶¶ 7–10, 12, 32, 38. For example, Bhavani teaches its patient care system can have a user

interface, which "could be any suitable interface for receiving or trading information," to allow a user to enter patient information. *See, e.g.*, Bhavani ¶ 32. Moreover, Bhavani teaches that such users can include patients who can enter their information into a user interface, rather than being restricted to health care providers, as Appellants allege. *Id.* ¶ 12. We also note that the patient, as the patient moves about the medical facility, is involved in providing at least patient location information by wearing a tag having a wireless transmitter that transmits location information. *See* Bhavani ¶¶ 7–10.

(ii) Scheduling the instructions

Appellants argue the combination of Bhavani and Horn fails to teach or suggest "scheduling the instructions for the remainder of the procedure based on the detected landmark," as recited in claim 1 and similarly recited in independent claim 9. App. Br. 10. According to Appellants, "[t]here is no meaningful interaction of the patient with the patient flow management in Bhavani beyond the location of the patient's electronic tag and perhaps some identifying information." *Id.*

The Examiner finds the combination teaches the disputed limitation. *See* Final Act. 5. More specifically, the Examiner finds Bhavani teaches or suggests that the "'patient flow management requires suitable tools to monitor, measure, analyze and report on the progress of patients as they move through the various stages . . . These metrics could be stored in a database and mined in reports to help optimize the use of the operating rooms during peak seasons or times of the day.'" *Id.* (citing Bhavani Figs 4, 5, 7, and related text).

We are unpersuaded by Appellants' arguments, which are conclusory. *See* 37 C.F.R. § 41.37(c)(1)(iv); *In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) (holding that "the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art").

(iii) Instructions relating to colon examination

Appellants argue the combination of Bhavani and Horn fails to teach or suggest "instructions as to how to perform one or more activities relating to colon preparation and to colon examination procedures," as recited in independent claim 1 and similarly recited in independent claim 9. App. Br. 11. Appellants argue Bhavani does not teach instructing the patient with regard to a medical procedure. *Id.* As to Horn, Appellants argue it "teaches the procedure but not the instructions or the steps for instructing the patient." *Id.*

The Examiner finds the combination teaches the disputed limitation. *See* Final Act. 4. More specifically, the Examiner finds Bhavani teaches receiving instructions via its teachings and suggestions concerning the "patient flow pattern 500, with prerequisite states 570 and non-prerequisite states 580. Prerequisite states 570 are states that need to be accomplished before the patient can enter another state." *Id.* (citing Bhavani ¶¶ 9, 10, 32, 36, 37). The Examiner also finds Horn teaches that relevant medical procedures can include colon examination procedures. *See* Final Act. 5–6 (citing Horn ¶¶ 20, 22, 23, 27, 31).

We agree with the Examiner's findings and adopt them as our own. The combined teachings, and Bhavani in particular, teach or suggest that a

patient is provided instructions for how to perform one or more activities at least *related* to an examination procedure under the broadest reasonable interpretation of the disputed limitation. *See* Bhavani ¶¶ 9, 10, 32, 36–37. For example, Bhavani teaches or suggests providing instructions for the patient to proceed to different locations (e.g., a waiting room, a nurse preliminary examination room, or doctor examination room) — going to exam rooms are activities at least related to medical procedures. *See* Bhavani ¶ 10 (teaching the management system can issue a command to bring a patient to another state location (e.g., registration state, a waiting room state, a nurse preliminary examination state, a doctor examination state, a prescription retrieval state, a payment state, and a check-out state), ¶ 32 (teaching or suggesting the system could "giv[e] the patient oral instructions as to where to go next"). Furthermore, we are unpersuaded by Appellants' arguments to the extent that they rely on the content of the instructions or the specific procedure. *See In re Ngai*, 367 F.3d 1336, 1339 (Fed. Cir. 2004); *In re Gulack*, 703 F.2d 1381, 1385 (Fed. Cir. 1983) (noting that when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability).

(iv) *Combining Bhavani and Horn*

Appellants argue there is no proper motivation to combine the relevant teachings of Bhavani and Horn. *See* App. Br. 12; Reply Br. 7. Appellants argue:

> [A] person of ordinary skill in the art would not think to use a system for detecting the position of a capsule in a patient's GI tract in combination with a system for "patient flow management and analysis using location tracking" according to

> Bhavani. Horn relates to a medical procedure, whereas Bhavani relates to the flow of patients in a hospital. The information from one is not relevant to the other.

App. Br. 12.

The Examiner finds the combination of Bhavani and Horn are properly combined. Ans. 5–6; Final Act. 6. More specifically, the Examiner finds:

> One of ordinary skill in the art would have recognized that applying the known technique of Horn would have yielded predictable results and resulted in an improved system. . . . Further, applying image detection in human lumen activities to Bhavani with received patient input information accordingly, would have been recognized by those of ordinary skill in the art as resulting in an improved system that would allow more detailed analysis of medical data according to specific medical images.

Ans. 5–6.

We find the Examiner provides "articulated reasoning [(e.g., reduce oil turbulence and velocity)] with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). We disagree with Appellants that the Examiner's reasoning provides insufficient motivation to combine the relevant teachings of Bhavani and Horn. *See* Ans. 5–6; *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) ("If a person of ordinary skill . . . can implement a predictable variation . . . , § 103 likely bars its patentability"); *id.* ("[W]hen a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious.") (citations omitted).

(v) Non-compliance

Appellants argue that the combination of Bhavani, Horn, and Giftakis fails to teach or suggest "recording a non-compliance indication when the patient input is not received within a pre-set time period," as recited in independent claim 25. App. Br. 14; Reply Br. 7. The Examiner finds that the combination, and Giftakis in particular, teaches or suggests the disputed limitation. Ans. 6.

The disputed limitation is a conditional step. During examination, claims are given their broadest reasonable interpretation consistent with the specification. *See In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The broadest reasonable interpretation encompasses instances in which the prerequisite condition for the disputed limitation is not met (i.e., when the patient input *is* received within a pre-set time period). Conditional steps employed in a method claim need not be found in the prior art if, under the broadest reasonable interpretation, the method need not invoke those steps. *See Ex parte Schulhauser*, No. 2013-007847, 2016 WL 6277792, at *4 (PTAB Apr. 28, 2016) (precedential) (holding "[t]he Examiner did not need to present evidence of the obviousness of the remaining method steps of claim 1 that are not required to be performed under a broadest reasonable interpretation of the claim").

Accordingly, we find Appellants' arguments unavailing.

CONCLUSION

Based on our above findings, we sustain the Examiner's § 101 rejection of claims 1, 3, 4, 6, 8–11, 14–17, 19–23, 25, 26, 30, and 31. We also sustain the Examiner's § 103(a) rejection of claims 1 and 9, as well as claims 3, 4, 6, 8, 10, 14–16, 19, 20, 22, 30, and 31, as Appellants do not provide separate arguments for their patentability. We also sustain the Examiner's § 103(a) rejection of claim 25, as well as claims 11, 17, 21, 23, and 26, as Appellants do not provide separate arguments for their patentability.

DECISION

We affirm the Examiner's decision rejecting claims 1, 3, 4, 6, 8–11, 14–17, 19–23, 25, 26, 30, and 31.

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

AFFIRMED