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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 13/648,162 | 10/09/2012 | Soenke WEISS | 87432.0002 | 3092 |
| 26582 | 7590 | 07/03/2018 | EXAMINER | |
| HOLLAND & HART, LLP 222 South Main Street, Suite 2200 P.O. Box 11583 SALT LAKE CITY, UT 84147 | | | JOSEPH, TONYA S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3628 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
| | | | 07/03/2018 | ELECTRONIC |

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SOENKE WEISS

Appeal 2017-002386
Application 13/648,162
Technology Center 3600

Before THU A. DANG, ELENI MANTIS MERCADER, and
JASON M. REPKO, *Administrative Patent Judges*.

REPKO, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 7, 8, 15–17, 25, 29, 32, 38–45, and 47–55. App. Br. 2.² Claims 2–6, 9–14, 18–24, 26–28, 30, 31, 33–37, and 46 were canceled.³ We have jurisdiction under 35 U.S.C. § 6(b).

We reverse and designate a new ground of rejection for claim 1.

THE INVENTION

Appellant's invention is a method for managing room cleaning at a hotel or other accommodation facility. Spec. 1:5–7. The method considers the time required to clean a large number of rooms with different occupants. *Id.*

Claim 1 is reproduced below:

1. A method of managing the cleaning of rooms at an accommodation facility such as a hotel, including:

recording variables related to the occupancy of rooms at the facility wherein the variables include at least:

a number of adults occupying the room,

¹ Appellant identifies the real party in interest as Optii Holdings Pty Ltd, Holland Park West, Queensland, Australia. App. Br. 1.

² Throughout this opinion, we refer to the Final Rejection (“Final Act.”) mailed July 2, 2015; the Advisory Action (“Adv. Act.”) mailed November 17, 2015; the Appeal Brief (“App. Br.”) filed May 19, 2016; the Examiner's Answer (“Ans.”) mailed October 5, 2016; the Reply Brief (“Reply Br.”) filed December 5, 2016; and Supplemental Appeal Brief (“Supp. Br.”) filed April 18, 2017.

³ In the Brief's “STATUS OF THE CLAIMS” section, Appellant explains that claim 46 is rejected. App. Br. 2. Claim 46, however, was canceled. *See* Response filed June 17, 2015. The claim is correctly listed as canceled in the Brief's Appendix. App. Br. 20;

a number of children occupying the room and,
a reason for occupancy of room,
calculating, using a microprocessor, expected cleaning times for
each room in accord with the variables by:

determining a cleaning time interval for the recorded
variables relating to the room using a historical average cleaning
time obtained using data from cleaned rooms that are associated
with similar variables relating to the occupancy of the room, and

adding a time interval for any scheduled periodical
cleaning tasks to the cleaning time interval and,

determining cleaning plans for the facility by scheduling
room cleaning in accord with the expected cleaning times.

THE REJECTION

Claims 1, 7, 8, 15–17, 25, 29, 32, 38–45, and 47–55 stand rejected
under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

Final Act. 4–5.

ANALYSIS

The Supreme Court’s two-step framework guides our analysis of
subject-matter eligibility under § 101. *See Alice Corp. Pty. Ltd. v. CLS Bank
Int’l*, 134 S. Ct. 2347, 2355 (2014). According to step one, “[w]e must first
determine whether the claims at issue are directed to a patent-ineligible
concept,” such as an abstract idea. *Id.* *Alice* step one “calls upon us to look
at the ‘focus of the claimed advance over the prior art’ to determine if the
claim’s ‘character as a whole’ is directed to excluded subject matter.”
Affinity Labs of Tex., LLC v. DIRECTV, LLC, 838 F.3d 1253, 1257 (Fed.
Cir. 2016).

If the claims are directed to an abstract idea, the claims are analyzed
under step two to determine whether the limitations, when considered both
“individually and ‘as an ordered combination,’” contain an “inventive

concept” sufficient to transform the claimed abstract idea into a patent-eligible application. *Alice* at 2355–58.

In identifying the specific claim limitations that are believed to be an abstract idea, the Examiner only points to the limitation “determining cleaning plans for a facility.” Final Act. 4. The Examiner then finds the remaining limitations, which include recording variables and determining intervals, are well-understood, routine, and conventional. *Id.*

Appellant argues that the Examiner has not provided factual support that these steps are well-understood or routinely practiced. App. Br. 11; Supp. Br. 4–5. We agree with Appellant in this regard. Indeed, “[w]hether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018). Here, the claim recites (1) recording specific variables and (2) calculating cleaning times, but the Examiner provides no evidence to support the finding that these limitations are conventional. Final Act. 4. Because the Examiner’s rejection is deficient in this regard, we reverse the Examiner’s rejection of claim 1.

The remaining claims were rejected under the same rationale. Final Act. 4–5. Because we do not sustain the Examiner’s rejection of claim 1 as being directed to ineligible subject matter, we also do not sustain the rejection of independent claims 25 and 32, which recite similar limitations, and dependent claims 7, 8, 15–17, 29, 38–45, and 47–55 for the same reasons.

NEW GROUND OF REJECTION FOR CLAIM 1

I

Although the Examiner erred in rejecting claim 1 as discussed above, we disagree with Appellant that claim 1 is directed to patent-eligible subject matter. For the reasons discussed below, we enter a new ground of rejection for claim 1 under 35 U.S.C. § 101.

Appellant argues that the claims are not directed to an abstract idea. App. Br. 10–12. According to Appellant, courts have not identified concepts relating to cleaning-plan determinations as one of the types of patent-ineligible concepts. *Id.* at 11 (citing *Alice*, 134 S. Ct. at 2356). Appellant further contends that these concepts are not the “basic tools” that implicate the policy behind the exclusionary principle of generic or fundamental concepts. App. Br. 11 (citing *Alice*, 134 S. Ct. at 2354). Appellant argues that they have presented a solution to a problem, similar to those claims held patent eligible. Reply Br. 1 (citing *TNS Media Research LLC v. TIVO Research & Analytics, Inc.*, 223 F. Supp. 3d 168 (S.D.N.Y. 2016)). Appellant also argues that claim 1 is similar to those in *Trading Technologies International, Inc. v. CQG, Inc.*, 675 F. App’x 1001 (Fed. Cir. 2017) (non-precedential). Supp. Br. 3–6. Specifically, Appellant contends the claims are directed to using “complex mathematical equations to optimize a process that had previously been carried out using fixed numbers without any variables.” *Id.* at 6.

We disagree for the reasons discussed below.

Here, “determining cleaning plans for a facility” is similar to those concepts described by the Federal Circuit as an idea of itself. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir.

2011). Specifically, the claim requires that the recited determination need only be “in accord with the expected cleaning times.” Such a determination could be carried out mentally by considering the calculated time. In *CyberSource*, the Federal Circuit explained that, because the claims sought to patent “‘the use of human intelligence in and of itself,’ the claims were drawn to abstract ideas.” *Id.* (quoting *In re Comiskey*, 554 F.3d 967, 981 (Fed. Cir. 2009)). Similarly, the claimed determination is a step that a person can go through in their minds, and as such, is an abstract idea. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146 (Fed. Cir. 2016) (holding that “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are treated] as essentially mental processes within the abstract-idea category” (citation omitted)).

Furthermore, the recited determination in claim 1 is broadly functional and result-oriented. For example, the claim does not recite how the determination is made, only that the determination is “in accord” with the calculations. The Federal Circuit has found that these types of claims are drawn to an abstract idea because they claim a function, “not a particular way of performing that function.” *Affinity Labs*, 838 F.3d at 1258. Like Appellant’s claim 1, the court explained that “[t]here is nothing in [the claim] that is directed to *how* to implement” the abstract idea, but rather, the “the claim is drawn to the idea itself.” *Id.* (emphasis in original).

Apart from the determination, the claim further recites (1) recording variables and (2) calculating cleaning times. But “[a]dding one abstract idea (math) to another abstract idea . . . does not render the claim non-abstract.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

The Federal Circuit has explained that “collecting information, including when limited to particular content (which does not change its character as information), [is] within the realm of abstract ideas” and that “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [is] essentially [a] mental process[] within the abstract-idea category.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016). Similarly, Appellant’s claimed steps of recording variables and calculating cleaning times are nothing more than collecting and analyzing information. In fact, these steps are broadly functional and result-oriented because they are only limited by the data they operate on and their output. This further underscores claim 1’s abstract nature.

That is, considering claim 1 as a whole, the recited method is directed to collecting information (recording variables) and analyzing information mentally and mathematically (calculating and determining) without more, which is abstract. *Id.*

Therefore, claim 1 is directed to an abstract idea.

II

Because the claims are “directed to an abstract idea,” we consider the claim limitations “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 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78–79 (2012)). The Supreme Court has described this analysis “as a search for an ‘inventive concept.’” *Alice*, 134 S. Ct. at 2355.

Appellant argues that, even if claim 1 is directed to an abstract idea, claim 1 is patent-eligible because (1) claim 1 does not preempt or monopolize the entire field of room-cleaning management, and (2) claim 1 provides an inventive concept that goes significantly beyond the abstract idea itself. App. Br. 12–15.

Regarding preemption, Appellant argues that claim 1 is not directed to all possible applications of room-cleaning management. *Id.* But “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). Furthermore, “questions on preemption are inherent in and resolved by the § 101 analysis” that we have applied above in step one and the step two analysis that follows. *See id.*

Appellant further argues that claim 1 recites more than computerizing a well-known process. App. Br. 13. According to Appellant, “[t]he claimed process has not been known or practiced in the hotel industry as indicated by the lack of any facts suggesting otherwise.” *Id.* Appellant argues that the invention improves the field of cleaning. *Id.* at 14. According to Appellant, the claims here are like those in *Enfish* because the claimed invention is different from the prior art, instead of being well-known and commonly practiced. *Id.* (discussing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016)). Appellant further argues that the claimed microprocessor operates in a novel way. Reply Br. 2.

The Federal Circuit, however, explains that “[e]ligibility and novelty are separate inquiries.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017) (citing *Affinity Labs*, 838 F.3d at

1263 (holding that “[e]ven assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”). “[A] claim for a *new* abstract idea is still an abstract idea.” *Synopsys*, 839 F.3d at 1151.

In the case that Appellant cites, *Enfish*, the Federal Circuit found that the eligible claims were focused on a specific software-based improvement to database techniques. 822 F.3d at 1335–36, *discussed in* App. Br. 13. By contrast, Appellant’s purported improvement is, at most, to the mathematical calculations, not the computers themselves. *See* App. Br. 12–15. Similarly, the Federal Circuit has recognized that “an invocation of already-available computers that are not themselves plausibly asserted to be an advance, for use in carrying out improved mathematical calculations, amounts to a recitation of what is ‘well-understood, routine, [and] conventional.’” *SAP Am., Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1023 (Fed. Cir. 2018) (alteration in original) (citing *Mayo*, 566 U.S. at 73).

Furthermore, we see no additional limitations in claim 1 apart from the abstract idea itself that is anything more than mere instructions to implement the above-identified concept on a computer. Considering the limitations individually, the method gathers information then performs a calculation of the expected cleaning times and determines intervals in accordance with the abstract mathematical calculations. Notably, these calculations are broadly functional and result-oriented in that they only specify what is calculated rather than a specific algorithm for calculating the cleaning times. Claim 1’s final step then calls for a determination that is “in accord with” the cleaning times, which falls within the category of abstract mental processes. Considering the full combination of limitations, the claim encompasses making a mental determination that is “in accord with” a

mathematical calculation. Therefore, considering the limitations individually and in combination, claim 1 lacks an “inventive concept.” Here, all limitations fall squarely in the abstract-idea realm. Our step-two analysis stands in contrast to the Examiner’s in that the Examiner merely concludes, without further support, that the calculations themselves are well-known, routine, and conventional. *See* Final Act. 4.

We, therefore, enter a new ground of rejection for claim 1.

Our authority to enter a new ground of rejection is discretionary. *See* 37 C.F.R. § 41.50(b) (stating, *inter alia*, that “[s]hould the Board have knowledge of any grounds not involved in the appeal for rejecting *any* pending claim, it *may* include in its opinion a statement to that effect with its reasons for so holding, and designate such a statement as a new ground of rejection of the claim”) (emphasis added). We decline to reject the remaining claims under our discretionary authority. However, “no inference should be drawn from a failure to exercise [our] discretion.” MPEP § 1213.02 (9th ed. Rev. 08.2017, Jan. 2018). That is, our decision not to reject every claim, as is the case here, does not mean that the remaining claims are necessarily patentable. *See id.* (“The Board’s reversal of a rejection should not be interpreted as an instruction to the Examiner to allow the claims so rejected.”). Rather, we leave the patentability determination of these claims to the Examiner.

DECISION

We reverse the Examiner’s rejection of claims 1, 7, 8, 15–17, 25, 29, 32, 38–45, and 47–55.

With our discretionary authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for independent claim 1 under 35 U.S.C. § 101.

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).

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

(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 MPEP § 1214.01.

REVERSED
37 C.F.R. § 41.50(b)