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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD A. VAUGHAN and SETH L. SIEGAL

Appeal 2018-003452
Application 12/861,749
Technology Center 3600

BEFORE CHARLES N. GREENHUT, JEREMY M. PLENZLER, and
SUSAN L.C. MITCHELL, *Administrative Patent Judges*.

PLENZLER, *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 1–18. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM and enter NEW GROUNDS OF REJECTION in accordance with 37 C.F.R. § 41.50(b).

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 Expedia, Inc. Appeal Br. 3.

CLAIMED SUBJECT MATTER

The claims are directed to processing reservation requests. Claim 1, reproduced below with emphasis added, is illustrative of the claimed subject matter:

1. A method for processing reservation requests for one or more inventory items, the method comprising:

maintaining, by a computing device, inventory data, wherein the inventory data is organized in accordance with a three-level hierarchy and wherein the three level hierarchy includes:

at least one group record defining a first level of detail for inventory information, wherein the first level of detail of individual group records corresponds to a group of the inventory data and comprises information common to all item category records associated with the individual group record and inventory records associated with the individual group record;

a set of item category records defining a second level of detail, wherein the second level of detail of individual item category records represents *a maximum combination of identifiable features* of a product or service corresponding to the individual item category record and comprises information common to all inventory records associated with the individual item category record, wherein the identifiable features can be expressed in a reservation request; and

a set of inventory records defining a third level of detail, wherein the third level of detail of individual inventory records corresponds to an inventory item that represents an instance of a product or service corresponding to an item category record, wherein the third level of detail includes at least one non-identifiable feature of the product or service, wherein the non-identifiable feature is not expressed in the reservation request and corresponds to an interrelation among the

inventory item and one or more second inventory items and wherein the one or more second inventory items represent one or more second instances of the product or service;

receiving, by the computer device, the reservation request;

identifying, by the computer device, a group record from the at least one group record, in accordance with the reservation request;

determining, by the computer device, a product or service to match the reservation request, wherein determining the matching product or service comprises identifying an item category record associated with the identified group record and wherein the identified item category record corresponds to the product or service that matches the reservation request;

determining, by the computer device, two or more inventory items representing instances to fulfill the determined product or service that matches the reservation request, wherein determining the two or more inventory items comprises identifying two or more corresponding inventory records associated with the identified item category record, wherein the third level of detail corresponding to at least one of the two or more inventory items includes a non-identifiable feature of the matching product or service and wherein the non-identifiable feature of the matching product or service is not expressed by the reservation request and corresponds to an interrelation among the determined two or more inventory items; and

generating, by the computing device, results in response to the reservation request based, at least in part, on the determined matching product or service, the determined two or more inventory items and the non-identifiable feature of the matching product or service.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Dvorak	US 7,155,402 B1	Dec. 26, 2006
Geoghegan	US 7,328,166 B1	Feb. 5, 2008
Zirngibl	US 2005/0220278 A1	Oct. 6, 2005
La Macchia	US 2006/0259335 A1	Nov. 16, 2006

REJECTIONS

Claims 1–18 are rejected under 35 U.S.C. § 101 as directed to ineligible subject matter.

Claims 1–6 and 9–18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Geoghegan and Zirngibl.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Geoghegan, Zirngibl, and Official Notice.

Claims 1–6 and 9–18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Geoghegan and La Macchia.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Geoghegan, La Macchia, and Official Notice.

Claims 1–6 and 9–18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Geoghegan and Dvorak.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Geoghegan, Dvorak, and Official Notice.

OPINION

Indefiniteness–New Ground

The claims each require “a set of item category records defining a second level of detail” that “represents a maximum combination of identifiable features of a product or service.” This limitation is central to the

dispute between Appellant and the Examiner with respect to the obviousness rejections. *See* Appeal Br. 27–28; Reply Br. 11; Ans. 16–17.

As explained in the Answer, “in view of the specification, the Examiner understands the phrase a maximum combination of identifiable features as more detailed information than the first level.” Ans. 17 (emphasis and internal quotations omitted). The Examiner’s determination is based on Appellant’s Specification. *See id.* at 16 (citing Spec. 18:9–12, 18:21–27).

Appellant contends that the Examiner’s “interpretation is unreasonably broad in view of the plain meaning of the word ‘maximum’” and “is clearly inconsistent with the plain meaning of ‘maximum.’” Reply Br. 11. Appellant contends that the Examiner has impermissibly “substitut[ed] a particular example of a ‘second level of detail’ described in the specification in place of the specifically recited ‘second level of detail’ that ‘represents a maximum combination of identifiable features.’” *Id.* Appellant contends that “[t]he specification does not contain a special definition for either ‘maximum’ or ‘second level of detail.’” *Id.* Based on the arguments presented with respect to the obviousness rejections, Appellant appears to contend that the phrase should be interpreted to mean the “most specific combinations of identifiable . . . features.” Reply Br. 11; Appeal Br. 28.

We agree with Appellant that there is no definition of “maximum” provided by the Specification. Indeed, the phrase “maximum combination” does not appear in the Specification, nor does the phrase “most specific combinations.” Notably, Appellant does not point to any particular portion of the Specification that supports its interpretation of the phrase “a

maximum combination of identifiable features of a product or service.” As the Examiner correctly notes, the Specification simply explains that “[t]he second level of detail is related to the first level of detail and contains more specific data associated with the inventory item.” Spec. 18:9–10.

Based on the record before us, we determine that the phrase “maximum combination of identifiable features” adds an unacceptable level of ambiguity into the claims because we are unable to determine the requirements of that phrase when read in light of the Specification. Rather than guess, or render the phrase essentially meaningless by applying the Examiner’s construction, we determine that the most appropriate course of action is to enter a new ground of rejection under 35 U.S.C. § 112, second paragraph. *See In re Packard*, 751 F.3d 1307, 1310 (Fed. Cir. 2014) (per curiam) (A claim is properly rejected as indefinite if, after applying the broadest reasonable interpretation in light of the specification, the metes and bounds of a claim are not clear because the claim contains words or phrases whose meaning is unclear.); *see also Ex parte McAward*, Appeal No. 2015-006416, 2017 WL 3669566, at *5 (PTAB Aug. 25, 2017) (precedential) (adopting the approach for assessing indefiniteness approved by the Federal Circuit in *Packard*).

Accordingly, we reject claims 1–18 under 35 U.S.C. § 112, second paragraph, as indefinite.

Written Description–New Ground

“The test for the sufficiency of the written description ‘is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.’” *Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d

671, 682 (Fed. Cir. 2015) (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)).

As noted above, we see no discussion of the phrase “maximum combination of identifiable features” in the Specification. Nor do we see any discussion of “most specific combinations of identifiable . . . features,” which Appellant appears to contend is the meaning of a “maximum combination of identifiable features.” Appeal Br. 28; Reply Br. 11.

The Specification explains that “[t]he second level of detail is related to the first level of detail and contains more specific data associated with the inventory item” and “is not as broad as the first level, but it can also be common to a number of inventory items.” Spec. 18:9–12. The Specification provides an example, where “[a] second level of detail utilized to define an inventory item is a SKU 504 record” with “[e]ach SKU 504 record correspond[ing] to a SKU group 502 and defin[ing] more specific data related to an inventory item.” *Id.* at 18:20–22. “[E]ach SKU 504 record corresponds to an identifiable product or service that can be sold to a consumer.” *Id.* at 18:22–23. In one example, “a SKU 504 record [is created] for each type of room in the hotel . . . such as double rooms, king size rooms, and penthouse suites.” *Id.* at 19:21–23.

The Specification provides no indication as to how many “identifiable features” are required in combination for the “second level of detail” recited in the claims. Accordingly, the Specification does not reasonably convey to those skilled in the art that the inventor had possession of a system or method including category records defining a “second level of detail of individual item category records represent[ing] a maximum combination of identifiable features,” as recited in the claims.

For at least this reason, we reject claims 1–18 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Obviousness

Because we determine the claims to be indefinite, and addressing the phrase “maximum combination of identifiable features” would require speculation on our part, we do not reach the merits of the obviousness rejections. Instead, we reverse those rejections *pro forma*. See *In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (holding that the Board erred in affirming a rejection of indefinite claims under 35 U.S.C. § 103(a), because the rejection was based on speculative assumptions as to the meaning of the claims).

Patent Eligibility

The Examiner determines that the claims are patent-ineligible under 35 U.S.C. § 101. Non-Final Act. 3–11. Appellant disputes the Examiner’s rejection, focusing on features common to the independent claims. Appeal Br. 12–24. Although Appellant reproduces language from claims 1, 10, and 15, Appellant argues the claims as a group. See 37 C.F.R. § 41.37(c)(1)(iv) (“A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim.”).

Accordingly, we select claim 1 as representative. Claims 2–18 stand or fall with claim 1. See *id.* (“When multiple claims subject to the same ground of rejection are argued as a group . . . the Board may select a single claim from the group . . . and may decide the appeal as to the ground of rejection . . . on the basis of the selected claim alone.”).

Section 101 of the Patent Act provides that “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof” is patent eligible. 35 U.S.C. § 101. Claim 1 falls within the literal scope of this provision because it recites a process.

The Supreme Court, however, has long recognized an implicit exception to this section: “Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l.*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). To determine whether a claim falls within one of these excluded categories, the Court has set out a two-part framework. The framework requires us first to consider whether the claim is “directed to one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 217. If so, we then examine “the elements of each 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*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78, 79 (2012)). That is, we examine the claims for an “inventive concept,” “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*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

Under the 2019 Eligibility Guidance, to decide whether a claim is “directed to” an abstract idea, we evaluate whether the claim (1) recites an abstract idea grouping listed in the guidance *and* (2) fails to integrate the recited abstract idea into a practical application. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 51 (Jan. 7, 2019)

(“2019 Eligibility Guidance”).² The groupings of abstract ideas listed in the guidance include, for example: “Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations” and “Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).” 2019 Eligibility Guidance, 84 Fed. Reg. at 52. If the claim is “directed to” an abstract idea, as noted above, we then determine whether the claim recites an inventive concept. The guidance explains that, when making this determination, we should consider whether the additional claim elements add “a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field” or “simply append[] well-understood, routine, conventional activities previously known to the industry.” 2019 Eligibility Guidance, 84 Fed. Reg. at 56.

Step 2(A), Prong 1

The Examiner explains that “the claimed method simply describes the concept of gathering, comparing and outputting data by reciting steps of receiving, matching and outputting (transmitting) data.” Non-Final Act. 3. The Examiner determines that “[t]he gathering and comparing merely employs mathematical relationships to manipulate existing information to generate additional information in the form of ‘generated results,’ and outputting said results,” which is “similar to the basic concept of manipulating information using mathematical relationships.” *Id.* at 3–4.

² An update to the 2019 Revised Patent Subject Matter Eligibility Guidance issued in October 2019 (“October 2019 Update,” available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

Although we agree that claim 1 recites an abstract idea, we characterize the claim as reciting mental processes, rather than mathematical concepts. Specifically, we determine that every step in the claim recites a mental process. That the claim requires each step to be performed by a “computer device” does not remove those limitations from properly being considered a mental process. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n. 14.

The limitations related to “maintaining . . . inventory data” are properly considered a mental process because those limitations can be performed with pen and paper. *See id.*; October 2019 Update 9. For example, the “three level hierarchy” could simply be a handwritten outline. We see nothing in the “maintaining” step that necessitates a computer to carry out its operations. The remaining steps of “receiving,” “identifying,” “determining,”³ and “generating” can all be performed in the human mind.

Accordingly, claim 1 recites an abstract idea (mental processes).

Step 2(A), Prong 2

The remaining limitations (those not included in the recited abstract idea noted above) are simply repeated recitations of performing the steps “by a computer device,” which cannot integrate the mental processes into a practical application because it simply uses a generic computer as a tool to perform the abstract idea and does not reflect an improvement in the functioning of the computer itself. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 55.

Accordingly, the claim 1 is directed to an abstract idea.

³ This applies to both “determining” steps.

Step 2(B)

Because we agree with the Examiner that the claim 1 is directed to an abstract idea, we next determine whether the claim provides an inventive concept. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 56.

The claimed use of a “computer device” to carry out the abstract idea “simply appends well-understood, routine, conventional activities previously known to the industry” (*see* 2019 Eligibility Guidance, 84 Fed. Reg. at 56). Indeed, the Specification concedes that the computer components used are well-known, routine, and conventional. *See* Spec. 14:14–18:6 (explaining repeatedly that “it is not necessary that all of these generally conventional components well known to those of ordinary skill in the relevant art be shown in order to disclose an enabling embodiment for practicing the present invention”). Appellant’s arguments that the claims improve computer functionality are not persuasive. Appeal Br. 13–24. This is made clear by the fact that the steps can each be performed in the human mind or with pen and paper.

Accordingly, claim 1 does not add any inventive concept.

Conclusion

For the reasons set forth above, after applying the 2019 Eligibility Guidance, we sustain the Examiner’s decision to reject claims 1–18 under 35 U.S.C. § 101.

Although we agree with the Examiner’s determination that the claims are ineligible under 35 U.S.C. § 101, because we characterize the abstract idea differently than the Examiner did in the rejection, we designate our affirmance as a new ground of rejection so Appellant may have an opportunity to respond.

CONCLUSION

The Examiner’s rejection under 35 U.S.C. § 101 is affirmed, but designated as a new ground of rejection. The Examiner’s rejections under 35 U.S.C. § 103 are reversed. New grounds of rejection under 35 U.S.C. § 112, first paragraph and second paragraph are added.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
1-18	101	Patent Eligibility	1-18		1-18
1-18	112 ¶ 1	Written Description			1-18
1-18	112 ¶ 2	Indefiniteness			1-18
1-6, 9-18	103	Geoghegan, Zirngibl		1-6, 9-18	
7, 8	103	Geoghegan, Zirngibl, Official Notice		7, 8	
1-6, 9-18	103	Geoghegan, La Macchia		1-6, 9-18	
7, 8	103	Geoghegan, La Macchia, Official Notice		7, 8	
1-6, 9-18	103	Geoghegan, Dvorak		1-6, 9-18	
7, 8	103	Geoghegan, Dvorak, Official Notice		7, 8	
Overall Outcome			1-18		1-18

TIME PERIOD FOR RESPONSE

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 that Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds 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 proceeding will be remanded to the examiner.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record.

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).

AFFIRMED; 37 C.F.R. § 41.50(b)