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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JAAKKO HANNUKAINEN, ANTTI JOHANNES ERONEN,  
JUSSI LEPPANEN, AMIR ABDI, and HENRI PURANEN

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Appeal 2015-003653  
Application 13/449,824  
Technology Center 3600

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Before MICHAEL C. ASTORINO, KENNETH G. SCHOPFER, and  
AMEE A. SHAH, *Administrative Patent Judges*.

SHAH, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

The Appellants<sup>2</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART and ENTER a NEW GROUND OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

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<sup>1</sup> Throughout this opinion, we refer to the Appellants' Appeal Brief ("Appeal Br.," filed Oct. 29, 2014), Reply Brief ("Reply Br.," filed Jan. 30, 2015), and Specification ("Spec.," filed Apr. 18, 2012), and to the Examiner's Answer ("Ans.," mailed Dec. 10, 2014) and Final Office Action ("Final Act.," mailed Apr. 29, 2014).

<sup>2</sup> According to the Appellants, the real party in interest is Nokia Corporation. Appeal Br. 1.

## STATEMENT OF THE CASE

The Appellants' invention is directed to "an approach for providing a calculated route using waypoints associated with a traveled route." Spec.

¶ 2.

Claims 1 and 11 are the independent claims on appeal. Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

1. A method comprising facilitating a processing of and/or processing (1) data and/or (2) information and/or (3) at least one signal, the (1) data and/or (2) information and/or (3) at least one signal based, at least in part, on the following:

a processing, by a processor, of one or more location logs to determine one or more waypoints, wherein the one or more location logs include, at least in part, one or more location samples for at least one device on a traveled route; and

a processing of the one or more waypoints via one or more routing engines to determine a calculated route as a representation of the traveled route, wherein the one or more waypoints are determined based, at least in part, on the one or more location samples.

Appeal Br. 21 (Claims App.).

## REJECTIONS

Claims 1–20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Final Act. 4.

Claims 1 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bleckman (US 2008/0201074 A1, pub. Aug. 21, 2008). *Id.* at 5.

Claims 2–10 and 12–20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bleckman and Case, JR. (US 2009/0319230 A1, pub. Dec. 24, 2009) ("Case"). *Id.* at 6.

## ANALYSIS

### *§ 112 – Indefiniteness*

The Examiner rejects claims 1–20 because the uses of the phrase “and/or” render the scope of the claims “unascertainable” and therefore indefinite. Final Act. 4. The Examiner further rejects claims 1–15 and 19 because the recited term “at least in part” is a relative term such that “one of ordinary skill in the art would not be reasonably apprised of the scope of the invention,” and is therefore indefinite. *Id.* at 4–5.

Conversely, the Appellants contend that one of ordinary skill in the art would understand that “and/or” means that the claim can include one or more of the elements that follow, for example “‘A and/or B and/or C’ means: ‘A’; ‘B’; ‘C’; ‘A and B’; ‘A and C’, ‘A and B and C’; or ‘B and C.’” Appeal Br. 5. The Appellants further contend that one of ordinary skill in the art would understand that “at least in part” similarly means at least one of the elements that follow. *Id.* at 5–6.

We conclude that the claims are not indefinite in that one of ordinary skill in the art would be able to readily ascertain whether the claims were infringed by a particular method. One of ordinary skill in the art would understand that “and/or” means one or more of the recited elements. *See id.* The Examiner’s concerns appear to be directed to matters of claim breadth, not indefiniteness. “Breadth is not indefiniteness.” *In re Gardner*, 427 F.2d 786, 788 (1970).

The Examiner further rejects claims 12–20 because “the phrase ‘is further caused to’ render[] the claims indefinite because the claim[s] include elements not actually disclosed (those encompassed by ‘is further caused to’) as the element that causes a next step is not disclosed, thereby rendering

the scope of the claims unascertainable.” Final Act. 5. Conversely, the Appellants contend that the phrase “‘is further caused to’ . . . is analogous to the use of ‘and further comprising’ with ‘comprising.’” Appeal Br. 6.

We conclude that the claims are not indefinite in that one of ordinary skill in the art would be able to readily ascertain whether the claims were infringed by a particular method. One of ordinary skill in the art would understand the claims to recite that the apparatus of claim 11, which is caused by the processor to perform an action, is further caused to perform the recited actions or functions that follow. We find that one of ordinary skill in the art would understand “the element that causes a next step” is the processor of claim 11 that causes the apparatus to perform functions. *See id.*

Therefore, we are persuaded of error in the Examiner’s rejection, and we do not sustain the Examiner’s rejections of claims 1–20 under 35 U.S.C. § 112, second paragraph.

#### *§ 102 – Anticipation*

The Appellants contend that the Examiner’s rejection of independent claims 1 and 11 is in error because Bleckman “fails to teach or even suggest” the processing steps recited in claim 1 and similarly recited in claim 11. Appeal Br. 10; Reply Br. 2, 5. After careful review of the Appellants’ arguments as presented in the Appeal and Reply Briefs, we do not agree with the Appellants’ contention.

The Examiner relies on Bleckman’s Abstract and paragraphs 2 and 7 for disclosing the subject matter of claims 1 and 11. Final Act. 5–6. The Examiner finds that Bleckman’s geographic locations are “reference points

in physical space used for purposes of navigation” as one of ordinary skill in the art would interpret “waypoint.” Ans. 3.

Bleckman discloses a “device, system, and method for converting geographic coordinates such as track logs to navigational routes matched to known paths such as known road networks.” Bleckman ¶ 2. The device includes a GPS receiver, a processing system, and a display. *Id.* Abstract. The GPS receiver and processor determine “a track log or other series of geographic coordinates corresponding to points along a path traveled by a user of the device.” *Id.* ¶¶ 7, 30. The processing system causes the device to access and convert the determined series of coordinates into a navigation route which can be easily followed by the user. *Id.* ¶ 7. In particular, the processing system compares the determined series to a database of known paths, including road segments, hiking trails, tracks, or other mapped paths, and displays to a user at least a portion of the matching path along with navigational directions. *Id.*

The Appellants’ argument that Bleckman does not anticipate the claims because it “fails to even recognize the problem addressed and solved by the claimed subject matter” (Appeal Br. 8; Reply Br. 2) is unpersuasive at least because it is not commensurate with the scope of the claims. Claims 1 and 11 do not recite limitations of addressing a specific problem.

We further find unpersuasive the Appellants’ argument that Bleckman does not disclose the claimed limitations. *See* Appeal Br. 10; Reply Br. 5. Claims 1 and 11 recite a method and system for facilitating processing or processing data, information, or a signal based on processing location logs to determining waypoints and processing waypoints via a routing engine to calculate a route as a representation of a traveled route wherein the

waypoints are determined at least on location samples. *See* Appeal Br. 21, 24, 25 (Claims App.). The Specification does not provide a specific definition of “waypoint.” As such, we find that the Examiner appropriately applies the broadest reasonable interpretation of “waypoint” in interpreting Bleckman’s geographic coordinates corresponding to points as waypoints. The Specification further does not provide a specific definition of “processing,” and the claims do not recite the specific steps/manner by which the processing limitations occur. As noted above, Bleckman discloses processing, by the apparatus including the GPS receiver, i.e., processor, points along a path traveled by a user, i.e., a location log with at least one location sample, into one or a series of geographic locations, i.e., one or more waypoints. *See* Bleckman ¶ 7. Bleckman further discloses processing, via the routing engine, i.e., processing system, the determined series, i.e., waypoints, to determine a calculated path, i.e., route. *See id.* As such, we find supported by a preponderance of the evidence the Examiner’s findings that Bleckman discloses the limitations as broadly recited in claims 1 and 11.

Thus, we are not persuaded of error on the part of the Examiner in the rejection of independent claims 1 and 11. We therefore sustain the rejection under 35 U.S.C. §102 of claims 1 and 11.

### *§ 103 – Obviousness*

#### Claims 2–7 and 12–17

The Appellants contend that the Examiner’s rejection of claims 2 and 12 is in error because Case, upon which the Examiner relies, does not disclose “at least one determination of an area bounded by the calculated route ... a designation of the area as a conquered area,” as recited in claim 2

and similarly recited in claim 12. Appeal Br. 13. Specifically, the Appellants argue that paragraph 112 of Case does not disclose determining an area bounded by the calculated route or designating an area as a conquered area. *Id.* at 14.

The Examiner finds that Case, at Figure 3 and paragraph 112, teaches “determination of an area bounded by the calculated route.” Final Act. 7. The Examiner acknowledges that Case does not state that an area has been conquered, but determines that the display of an area previously being bound meets the limitation. *See id.* The Examiner further determines that combining the teachings of Bleckman and Case would “improve upon processing data.” *Id.*

However, the Examiner does not adequately explain how Case’s display of data superimposed on a map corresponding to a location (*see* Case ¶ 112) teaches determining an area bounded by the calculated route or designating the area as a conquered, or bound, area. Even assuming *arguendo* that Case discloses determining or designating a bound area, the Examiner has not adequately explained how one of ordinary skill in the art would combine that with Bleckman’s calculated route to meet the claimed limitation, or how such a combination would improve the data.

Thus, we are persuaded of error in the Examiner’s rejection of claims 2 and 12. We therefore do not sustain the rejection under 35 U.S.C. § 103 of claims 2 and 12. We also do not sustain the rejection under 35 U.S.C. § 103 of claims 3–7 and 13–17, which ultimately depend from claims 2 or 12. Appeal Br. 21–26 (Claims App.)



Claims 8, 9, 18, and 19

Claims 8, 9, 18, and 19 depend from claims 1 or 11. Appeal Br. 22, 27 (Claims App.). For these claims, the Appellants do not provide separate arguments, but rely on the arguments presented for the rejection of claims 1 and 11. *See* Appeal Br. 12. Thus, for the same reasons we were not persuaded of error in the rejection of claims 1 and 11, we are also not persuasive of error in the rejection of claims 8, 9, 18 and 19. We therefore sustain the rejection under 35 U.S.C. § 103 of claims 8, 9, 18, and 19.

Claims 10 and 20

The Appellants contend that the Examiner's rejection of claims 10 and 20 is in error because Case, upon which the Examiner relies, does not disclose the data, information, or signal being based in part on a processing of logs to cause a filtering of a location sample by removing certain samples that exceed a rate of travel range, wherein the waypoints are determined based on the filtering, as recited in claim 10 and similarly recited in claim 20. Appeal Br. 18. Specifically, the Appellants argue that Case does not disclose filtering any data, and particularly does not disclose filtering based on travel range. *Id.*

The Examiner finds that Case, at paragraphs 6 and 8, teaches the claimed limitation. Final Act. 10. A review of the cited paragraphs reveals that Case discloses using GPS data to calibrate devices and using GPS system and non-GPS system data to provide information. However, the Examiner does not adequately explain, and we do not see, how the cited paragraphs teach filtering data based on the required criteria of travel range.

Thus, we are persuaded of error in the Examiner's rejection of claims 10 and 20. We therefore do not sustain the rejection under 35 U.S.C. § 103 of claims 10 and 20.

#### NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.50(b), we reject claims 1–20 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. We find the claims ineligible for patent protection because they are directed to a non-statutory abstract idea.

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws 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) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013)). The Court has, thus, made clear that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

Following the Supreme Court, the Federal Circuit has similarly held that mental processes are not patent-eligible subject matter. Therefore, the court has held that methods which can be performed entirely in the human mind are unpatentable not because “there is anything wrong with claiming mental method steps as part of a process containing non-mental steps,” but rather because “methods which can be performed *entirely* in the human mind

are the types of methods that embody the ‘basic tools of scientific and technological work’ that are free to all men and reserved exclusively to none.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011) (citation omitted).

The Supreme Court in *Alice* reiterated the two-step framework, set forth previously in *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1300 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If so, the second step is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether the additional elements “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (citing *Mayo*, 132 S. Ct. at 1298). In other words, the second step is to “search for 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.’” *Id.* (alteration in original) (citing *Mayo*, 132 S. Ct. at 1294). The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 132 S. Ct. at 1293. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea, and merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

Under the first step of the analysis, the claimed subject matter of claims 1–20 is directed to processing data. *See* Appeal Br. 21 (Claims App.). Further, according to the Specification, the invention relates to “providing a calculated route.” Spec. ¶ 2. In that context, the claims are directed to processing data to calculate a route, a mathematical algorithm for organizing human activity and a fundamental economic practice — an abstract idea similar to those of *Parker v. Flook*, 437 U.S. 584 (1978) (mathematical algorithm used for adjusting an alarm limit); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (employing a mathematical algorithm to generate a device profile); *Elec. Power Grp. LLC v. Alstom*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (collecting information and “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category.”); *and In re Meyer*, 688 F.2d 789, 795–6 (CCPA 1982) (identifying probable locations of malfunctions is a “mathematical algorithm representing a mental process that has not been applied to physical elements or process steps”). Here, the claims involve nothing more than generically processing data to calculate a route, without any particular inventive technology, i.e., an abstract idea. *See Elec. Power Grp.*, 830 F.3d at 1354.

Under the second step of the analysis, we find neither independent claims 1 and 11 nor dependent claims 2–10 and 12–20 have any additional elements, alone or in combination, that amount to significantly more to transform the abstract idea of processing data to calculate a route into a patent-eligible invention. Independent claim 1 recites a method for facilitating the processing or processing data, information, or signals based

on the processing of location data and determined waypoint data. Appeal Br. 21 (Claims App.) Dependent claims 2–10 further define the data, information, or signal. *See id.* at 21–24. Similarly, independent claim 11 and dependent claims 12–20 recite an apparatus comprising a generic processor and memory for processing location data and waypoint data. *Id.* at 24–27. Any general purpose computer available at the time the application was filed would have been able to perform these functions. The Specification supports that view. *See Spec.* ¶¶ 26–30, Fig. 1 (showing a generic computer). The introduction of a computer to implement an abstract idea is not a patentable application of the abstract idea. *Alice*, 134 S. Ct. at 2357–58. The computer implementation here is purely conventional and performs basic functions. *See id.* at 2359–60. The claims do not purport to improve the functioning of the computer itself, nor do they effect an improvement in any other technology or technical field. *See id.* at 2359.

Thus, under the two-part analysis, we find that claims 1–20 cover claimed subject matter that is judicially-excepted from patent eligibility under § 101.

Therefore, we enter a new ground of rejection of claims 1–20 under 35 U.S.C. § 101.

#### DECISION

The Examiner’s rejection of claims 1–20 under 35 U.S.C. § 112, second paragraph, is REVERSED.

The Examiner’s rejection of claims 1 and 11 under 35 U.S.C. § 102(b) is AFFIRMED.

The Examiner's rejection of claims 2–7, 10, 12–17, and 20 under 35 U.S.C. § 103(a) is REVERSED.

The Examiner's rejection of claims 8, 9, 18, and 19 under 35 U.S.C. § 103(a) is AFFIRMED.

A NEW GROUND OF REJECTION has been entered for claims 1–20 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

In addition to affirming the Examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” 37 C.F.R. § 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. . . .

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-IN-PART; 37 C.F.R. § 41.50(b)