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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT DENARO

Appeal 2017-011284
Application 12/156,304
Technology Center 3600

Before BRETT C. MARTIN, JILL D. HILL, and PAUL J. KORNICZKY,
Administrative Patent Judges.

MARTIN, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant,¹ Robert Denaro, appeals from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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 Here Global B.V. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to a method and system that enables taking a precautionary action in a vehicle, such as providing a warning to a vehicle driver about a potentially difficult or hazardous driving condition on the road network. Spec. 1:14–16. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A computer implemented method for making an augmented version of a database in advance of operation of a vehicle that can be used as a component in a vehicle system that provides a precautionary action in the vehicle when the vehicle approaches a potentially hazardous location, wherein the potentially hazardous location is one in which a first condition is present at a first road segment along a road network in a geographic region and a second condition is present at a second road segment along the road network successive to the first road segment wherein one of the first and second conditions comprises a hilltop and another of the first and second conditions comprises an intersection of roads, the method comprising:

selecting, by a processor, data contained in a first version of a database stored in a computer readable medium coupled with the processor that indicates locations of intersections of roads and elevations along roads to identify locations of intersections of roads located over hilltops located along roads throughout the geographic region;

forming, by the processor, the augmented version of the database by adding precautionary action data to the first version of the database in association with the identified locations operative to indicate that a precautionary action is to be taken by the vehicle system when the vehicle is approaching the identified locations; and

storing, by the computer, the augmented version of the database on a nontransitory computer readable medium for use by the vehicle system wherein the vehicle system is operative, during operation of the vehicle, to provide a precautionary action when the vehicle system determines that the vehicle is

approaching a location associated with precautionary action data in the augmented version of the database.

REFERENCES

The prior art relied upon by the Examiner is:

Tanaka	US 6,470,265 B1	Oct. 22, 2002
Bechtolsheim	US 2002/0161513 A1	Oct. 31, 2002
Han	US 2008/0243380 A1	Oct. 2, 2008

REJECTIONS

Claims 1–20 stand rejected under 35 U.S.C. § 101. Final Act. 2.

Claims 1–20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka, Bechtolsheim, and Han. Final Act. 10.

OPINION

Standard for Patent Eligibility

In issues involving subject matter eligibility, our inquiry focuses on whether the claims satisfy the two-step test set forth by the Supreme Court in *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208 (2014). The Supreme Court instructs us to “first determine whether the claims at issue are directed to a patent-ineligible concept,” *id.* at 216–18, and, in this case, the inquiry centers on whether the claims are directed to an abstract idea. If the initial threshold is met, we then move to the second step, in which we “consider 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.” *Id.* at 217 (*quoting Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79, 78 (2012)).

The Supreme Court describes the second step as a 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.* (quoting *Mayo*, 566 U.S. at 72–73).

The USPTO recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* (“Memorandum”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (*i.e.*, mathematical concepts, certain methods of organizing human interactions such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum.

ANALYSIS

Claim Grouping

Appellant argues claims 1–20 as a group. Appeal Br. 5–13. We select claim 1 as representative of the group, and claims 2–20 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Examiner’s Findings and Conclusion

In the first step of the *Alice* inquiry, the Examiner rejects claims 1–20 “because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more.” Final Act. 2. The Examiner identifies the claimed series of steps for flagging precautionary data in a database as the abstract idea. *Id.* At *Alice* step 2, the Examiner additionally finds that the claims do not add a meaningful limitation to the abstract idea so as to amount to significantly more than the judicial exception. *Id.*

Analysis According to the Guidelines

Step One: Does Claim 1 Fall within a Statutory Category of § 101?

We first examine whether the claim recites one of the enumerated statutory classes of subject matter, i.e., process, machine, manufacture, or composition of matter, eligible for patenting under 35 U.S.C. § 101. Claim 1 is directed to a method, which is one of the statutory classes (i.e., a process) under 35 U.S.C. § 101.

Step 2A, Prong One: Does Claim 1 Recite a Judicial Exception?

We next look to whether the claim recites any judicial exceptions, including certain groupings of abstract ideas, i.e., mathematical concepts,

certain methods of organizing human activity such as a fundamental economic practice, or mental processes.

In this instance, claim 1, for example, recites the steps of selecting data, forming the augmented version of the data, and storing the augmented version of the data. Specifically, the claims recite:

selecting, by a processor, data contained in a first version of a database stored in a computer readable medium coupled with the processor that indicates locations of intersections of roads and elevations along roads to identify locations of intersections of roads located over hilltops located along roads throughout the geographic region;

forming, by the processor, the augmented version of the database by adding precautionary action data to the first version of the database in association with the identified locations operative to indicate that a precautionary action is to be taken by the vehicle system when the vehicle is approaching the identified locations; and

storing, by the computer, the augmented version of the database on a nontransitory computer readable medium for use by the vehicle system wherein the vehicle system is operative, during operation of the vehicle, to provide a precautionary action when the vehicle system determines that the vehicle is approaching a location associated with precautionary action data in the augmented version of the database.

Although these steps are claimed as being done by a processor or computer, the activities themselves are all capable of being performed in the human mind and as such each step of selecting, forming, and storing in the claim falls into the abstract idea of mental processes. *See, e.g., CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.”).

We therefore determine that claim 1 recites the abstract idea of mental processes, which is a judicial exception to patent-eligible subject matter.

Step 2A, Prong Two: Does Claim 1 Recite Additional Elements that Integrate the Judicial Exceptions into a Practical Application?

Following our Office guidance, having found that claim 1 recites a judicial exception, we next determine whether the claim recites “additional elements that integrate the exception into a practical application” (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)). *See* Revised Guidance, 84 Fed. Reg. at 54. As noted above, each of the claimed steps is merely recited as being performed by a computer or processor. As used in the claims, the computer and processor are merely generic components of a computer system that do not result in an improvement in the functioning of a computer or other technology or technological field. The recitations of the generic structures with which the recited steps are performed are merely instructions to use a computer system as a tool to perform the abstract idea. Thus, the claims do not apply, rely on, or use the mental process steps in a manner that imposes a meaningful limit on those steps. Rather, the claim is simply a drafting effort designed to monopolize the mental process steps of claim 1.

The additional elements do not add meaningful limits to the mental process steps recited in claim 1. Instead, the generic computer system limitations are no more than instructions to apply the judicial exception (i.e., a mental process) using generic computer elements. *See* MPEP § 2106.05(f) (“Use of a computer or other machinery in its ordinary capacity for . . . tasks (*e.g.*, to receive, store, or transmit data) or simply adding a general purpose computer or computer components after the fact to an abstract idea . . . does not provide significantly more.”).

In short, the additional elements discussed above: (1) do not improve the functioning of a computer or other technology; (2) are not applied with any particular machine; (3) do not effect a transformation of a particular article to a different state; and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment. *See* MPEP §§ 2106.05(a)–(c), (e)–(h). Consequently, the claimed invention does not integrate the abstract idea into a “practical application.”

For these reasons, the additional elements of claim 1 do not integrate the judicial exception into a practical application. Thus, claim 1 is directed to an abstract idea, which is a judicial exception to patent eligible subject matter under 35 U.S.C. § 101.

Step 2B: Does Claim 1 Recite an Inventive Concept?

We next consider whether claim 1 recites any elements, individually or as an ordered combination, that transform the abstract idea into a patent-eligible application, e.g., by providing an inventive concept. *Alice*, 573 U.S. at 217–18. As noted above, the only additional elements are a processor and computer used for routine computer functionality to enact the method steps. These additional elements do not provide, either individually or as a combination, improvements to another technology or technical field or the functioning of the computer itself.

According to guidance, under Step 2B, “examiners should . . . evaluate *the additional elements* individually and in combination . . . to determine whether they provide an inventive concept (*i.e.*, whether the additional elements amount to significantly more than the exception itself).” *See* Guidance 84 Fed. Reg. at 56 (emphasis added). Thus, the second step of

the inquiry (Step 2B) looks at the additional elements in combination. *See, e.g.,* Examples accompanying Guidance (Example 37 (claim 3 analysis) and Example 40 (claim 2 analysis)). *See also BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (“It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.”)

As noted above, the computer and processor are invoked as conventional tools. Apart from being used to perform the abstract idea itself, these generic computer system components only serve to perform well-understood functions (e.g., storing, selecting, analyzing, and outputting data). *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (“the use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter”). In our view, claim 1 fails to add a specific limitation beyond the judicial exception that is not ‘well-understood, routine, conventional’ in the field, but instead “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.” *See* Guidance, 84 Fed. Reg. at 56. That is, we are not persuaded that claim 1 is directed to a specific application designed to achieve an improved technological result, as opposed to being directed to merely ordinary functionality of the above-recited additional elements to apply an abstract idea. For the reasons discussed above, we find no element or combination of elements recited in claim 1 that contains any “inventive concept” or adds

anything “significantly more” to transform the abstract concept into a patent-eligible application. *See Alice*, 573 U.S. at 221.

Appellant’s Contentions

Appellant first argues that the claims are not an abstract idea because “[t]he claims represent a specific application [that] does not entirely preempt the idea of providing for precautionary actions by electronic navigation systems.” App. Br. 7. As the Examiner points out, however, preemption “is not considered a standalone test for patent eligibility.” Ans. 3. Regardless of preemption, an “abstract idea remains an abstract idea and is not eligible for patent protection without significantly more recited in the claims.” *Id.*; *see Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 573 U.S. at 216). Although “preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

Appellant further argues that “the specifically disclosed and claimed identification of road feature combinations from a road network database and augmentation thereof to add precautionary action data are additional elements that provide ‘something more’ than mere data communications.” App. Br. 10. The Examiner responds, and we agree, that the steps, for example in claim 1, “are selecting data, forming the augmented version of the data, and storing the augmented version of the data.” Ans. 4. We also agree with the Examiner’s conclusion that “[t]he claims are not directed towards overcoming a problem associated with computers, roads or vehicles, but rather are directed towards applying a computer application to implement the abstract idea of gathering and manipulating data to result in a precautionary action.” Ans. 8. The Examiner is also correct that the

additional elements in the claim “do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea.” *Id.*

Appellant also disagrees with the Examiner “that providing a warning or notification is an insufficient real world result that can render[] the claims patentable.” Reply Br. 6. We agree with the Examiner, however, that “a precautionary action . . . is interpreted as merely a warning or notification, which is a communication of data or information to an operator of a vehicle.” Ans. 9. Essentially, this step is merely a displaying of data, which is nothing more than conventional data processing, similar to the rest of the claimed steps. For the reasons above, we sustain the Examiner’s rejection. Because this rejection applies to all claims, we do not reach the obviousness rejection.

DECISION

The Examiner’s § 101 rejection is AFFIRMED.

FINALITY AND RESPONSE

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