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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* IAN ARIC MONDRAGON, ASHISH AGARWAL,  
RAHUL RAVIKUMAR, PHILIP STANGER, and  
VOJISLAV SAMSALOVIC

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Appeal 2019-007010  
Application 14/503,113  
Technology Center 3600

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Before JAMES P. CALVE, BRETT C. MARTIN, and  
MICHAEL J. FITZPATRICK, *Administrative Patent Judges*.

FITZPATRICK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant, Apple Inc.,<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–43. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> Appellant refers to the applicant as set forth in 37 C.F.R. § 1.42. Appellant identifies itself as the sole real party in interest. Appeal Br. 1.

## STATEMENT OF THE CASE

### *The Specification*

The Specification’s “disclosure relates generally to location-based services.” Spec. ¶2. The Specification explains:

Some mobile devices have features for determining a geographic location. For example, a mobile device can include a receiver for receiving signals from a global satellite system (e.g., global positioning system or GPS). The mobile device can determine a geographic location, including latitude and longitude, using the received GPS signals. The mobile device can then display the geographic location on a virtual map on a display screen. The virtual map can be stored in various data formats. The mobile device may visit a venue that includes indoor space. Maps of indoor space may not be easily available. Even when the maps are available, the maps may not be up to date due to frequent changes to the indoor space, e.g., when a store moves into or out of a mall causing floor plan to be reconfigured. Even when the maps are up to date, indoor navigation may be difficult or unavailable due to lack of accurate GPS signals in the indoor space as well as lack of integration between maps of outdoor space and maps of indoor space.

*Id.* ¶3. Thus, the Specification describes “[t]echniques for generating maps of venues.” *Id.* ¶4.

### *The Rejected Claims*

Claims 1–43 are rejected. Final Act. 1. No other claims are pending.

*Id.* Claims 1, 15, and 29 are independent. Appeal Br. 30–44. Claim 1 is illustrative and reproduced below.

1. A method comprising:

receiving venue data by a venue data server from a venue data provider computer, the venue data including a physical feature and a conceptual feature, the physical feature including a first data object describing a physical structure at a venue, the

conceptual feature including a second data object describing an entity that occupies or is associated with a portion of the venue;

receiving probe data, the probe data including application launch data from one or more user devices, the probe data indicating user activities in the venue and user movements in the venue, and the application launch data indicating an execution of one or more application programs on the one or more user devices in the venue by the one or more user devices in the venue;

enriching the venue data using the probe data including the application launch data, including revising inconsistencies in the venue data and adding information to the venue data by matching the user activities with an attribute of the entity and matching the user movements with the physical structure;

storing the enriched venue data on a storage device for providing an indoor location service of the venue to a user device; and

generating a computerized mapping product based on the enriched venue data.

*Id.* at 30.

### *The Examiner's Rejection*

The Examiner rejected all pending claims under the judicial exception to 35 U.S.C. § 101. Final Act. 2.

## DISCUSSION

### *Patent Eligibility Framework*

Section 101 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. However, the Supreme Court has “long held that this provision contains an important

implicit exception: [l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In analyzing patent-eligibility questions under the judicial exception to 35 U.S.C. § 101, we “first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice*, 573 U.S. at 218. If the claims are determined to be directed to an ineligible concept, then 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, 77 (2012)).

On January 7, 2019, the Director issued 2019 Revised Patent Subject Matter Eligibility Guidance (“Revised Guidance”), which explains how the Director directs that patent-eligibility questions under the judicial exception to 35 U.S.C. § 101 be analyzed. 84 Fed. Reg. 50–57; *see also* *October 2019 Update: Subject Matter Eligibility* (available at [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.ddf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.ddf)).

Per the Revised Guidance, the first step of *Alice* (i.e., Office Step 2A) consists of two prongs. In Prong One, we must determine whether the claim recites a judicial exception, i.e., an abstract idea, a law of nature, or a natural phenomenon. 84 Fed. Reg. at 54 (Section III.A.1.). If it does not, the claim is patent eligible. *Id.* With respect to the abstract idea category of judicial exceptions, an abstract idea must fall within one of the enumerated groupings of abstract ideas in the Revised Guidance or be a “tentative abstract idea,” with the latter situation predicted to be rare. *Id.* at 51–52 (Section I, enumerating three groupings of abstract ideas),

54 (Section III.A.1., describing Step 2A Prong One), 56–57 (Section III.C., explaining the identification of claims directed to a tentative abstract idea).

If a claim does recite a judicial exception, we proceed to Step 2A Prong Two, in which we determine if the “claim as a whole integrates the recited judicial exception into a practical application of the exception.” *Id.* at 54 (Section II.A.2.). If it does, the claim is patent eligible. *Id.*

If a claim recites a judicial exception and fails to integrate it into a practical application, we then proceed to the second step of *Alice* (i.e., Office Step 2B). In that step, we evaluate the additional limitations of the claim, both individually and as an ordered combination, to determine whether they provide an inventive concept. *Id.* at 56 (Section III.B.). In particular, we look to whether the claim:

- Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present; or
- simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.

*Id.*

*Independent Claim 1 and  
Dependent Claims 2–9 and 12–14*

Appellant argues against the rejection of claims 1–9 and 12–14 together. Appeal Br. 15–20. We choose claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Revised Guidance Step 2A Prong One

In Prong One of Step 2A, we determine whether claim 1 recites a judicial exception (i.e., a law of nature, natural phenomenon, or abstract idea).

The Examiner determined that “[t]he claims recite an abstract idea instructing how to *enrich (update/change) venue map data based on user survey data.*” Ans. 3; *see also* Final Act. 3. The Examiner determined that this abstract idea is described by the following claim limitations:

*receiving venue data from a venue data provider, the venue data including a physical feature and a conceptual feature, the physical feature including a first data object describing a physical structure at a venue, the conceptual feature including a second data object describing an entity that occupies or is associated with a portion of the venue; receiving probe data, the probe data including the probe data indicating user activities in the venue and user movements in the venue; enriching the venue data using the probe data, including revising inconsistencies in the venue data and adding information to the venue data by matching the user activities with an attribute of the entity and matching the user movements with the physical structure; and storing the enriched venue data for providing an indoor location service of the venue to a user.*

Final Act. 3; *see also* Ans. 3. The Examiner determined that the abstract idea falls within the “Mental processes” grouping enumerated in the Revised Guidance. Ans. 3; *see also* 84 Fed. Reg. at 52 (Section I.C.).

Although Appellant repeatedly states that it “does not concede” that claim 1 recites an abstract idea (*see, e.g.,* Appeal Br. 15), Appellant does not present arguments rebutting the Examiner’s determination that it does. Instead, Appellant proceeds to directly Step 2A Prong Two. *Id.*

On the record presented, we are not apprised of error in the Examiner’s determination, under Step 2A Prong One of the Revised Guidance, that claim 1 recites an abstract idea. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“The focus of the asserted claims . . . is on collecting information, analyzing it, and displaying certain results of the collection and analysis. . . . [W]e have treated analyzing information by steps go through in their minds or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.”).

Revised Guidance Step 2A Prong Two

In Prong Two of Step 2A, we determine whether claim 1 as a whole integrates the recited judicial exception (here, an abstract idea) into a practical application of the exception.

Appellant’s claim 1 is not ineligible merely because it recites the abstract idea instructing how to enrich (update/change) venue map data based on user survey data. *Cf. Mayo*, 566 U.S. at 71 (“[A] process is not unpatentable simply because it contains a law of nature or a mathematical algorithm.”) (quoting *Diamond v. Diehr*, 450 U.S. 175, 187 (1981)).

One exemplary consideration as to whether a recited abstract idea is integrated into a practical application is whether additional claim language “reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” 84 Fed. Reg. at 55. Appellant argues that such is the case here. Appeal Br. 15–16. In particular, Appellant argues that “the claimed subject matter improves a computerized mapping system, at least in part, by enabling the system to automatically generate maps that are more detailed, accurate, and ‘flexible’ based on



contextual information, even despite changes to a venue over time.” *Id.* at 16 (quoting Spec. ¶8). Appellant emphasizes the use of “application launch data,” automation in lieu of “direct human input,” and “data specific to computer systems.” *Id.* (emphasis omitted). None of these, however, demonstrates or reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field. The claimed method receives and processes different types of data without reciting a technological improvement in the way the data is obtained, received, or analyzed beyond “enriching” it. *See Elec. Power*, 830 F.3d at 1353 (“Information as such is an intangible.”).

Appellant’s purported technological improvement is an increase in the efficiency of updating/enriching computerized maps. *See* Appeal Br. 16 (“In contrast, absent these specific rules, computerized mapping products could not be generated in a similarly efficient manner without human intervention.”). But increased efficiency through the use of conventional computing processes is not an improvement in computer technology itself. *See, e.g., Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“[W]ith the exception of generic computer implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”); *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (holding that computer-implemented method for “anonymous loan shopping” was an abstract idea because it could be “performed by humans without a computer”); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (“Courts have examined claims that required the use of a computer and still found that the

underlying, patent-ineligible invention could be performed via pen and paper or in a person’s mind.”).

*Electric Power Group* is particularly instructive here. There, the Federal Circuit held:

[M]erely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.

...

Inquiry therefore must turn to any requirements for *how* the desired result is achieved. But in this case the claims’ invocation of computers, networks, and displays does not transform the claimed subject matter into patent-eligible applications. The claims at issue do not require any nonconventional computer, network, or display components, or even a “non-conventional and non-generic arrangement of known, conventional pieces,” but merely call for performance of the claimed information collection, analysis, and display functions “on a set of generic computer components” and display devices.

830 F.3d at 1355. Appellant’s claim 1 likewise does not reflect an improvement in *how* the desired results are achieved. Instead, they use conventional computer components to “receiv[e],” “enrich[,],” “stor[e],” and “generat[e]” data. *See, e.g.*, Appeal Br. 30 (claim 1).

Appellant argues that the results achieved by its invention are better because they exclude “subjective human factors” that would arise by “a human map creator . . . conduct[ing] a subjective review of information about a venue (e.g., directory listings and subjective observations of the venue), and manually compose a subjective summary of the information that he reviewed.” Appeal Br. 16–17 (emphasis omitted). This argument is not

persuasive for two reasons. First, it is not commensurate with scope of claim 1, which, although not requiring “subjective review of information” or “subjective human factors,” does not exclude either. Second, and more importantly, Appellant does not adequately explain how avoiding “subjective review of information” or “subjective human factors” could constitute a *technological* improvement. Appeal Br. 17 (emphasis omitted). We are not persuaded that it does.

Another exemplary consideration as to whether a recited abstract idea is integrated into a practical application is whether additional claim language “implements [the abstract idea] with, or uses [the abstract idea] in conjunction with, a particular machine or manufacture that is integral to the claim.” 84 Fed. Reg. at 55. Invoking this consideration, Appellant argues:

the claims specifically recite computer system-related limitations that are integral to the claim, such that those directed to “application launch data” (i.e., a concept that could have not existed prior to the development of computer technology) and the use of such “application launch data” to enrich venue data in electronic mapping systems. These aspects have specific computer-related benefits.

....

That is, aspects of the invention enable a computerized mapping system to determine information such as a “feature categorization” of a venue based on “application launch data . . . indicating an execution of one or more application programs.” “Application programs” are inextricably tied to computer technology, and do not have an analog in the pre-computer world. Thus, the claims are directed to solving problems specific to computer technology using processes that are also specific to computer technology (e.g., creating a computerized mapping product based on data regarding the launching of “application programs”).

Appeal Br. 17–18 (block quote of Spec. ¶111 omitted) (emphasis omitted).

Appellant’s argument is not persuasive, in the first instance, because it relies on a feature described in the Specification (i.e., “feature categorization”), which is not recited in claim 1. *See Ericsson Inc. v. TCL Commc’n Tech. Holdings Ltd.*, 955 F.3d 1317, 1325 (Fed. Cir. 2020) (holding that the specification must always yield to the claim language when identifying the true focus of a claim); *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017) (“As with claim 1 of the ’187 patent, the problem is that no inventive concept resides in the claims.”). Moreover, “after *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014). Accordingly, we determine that claim 1 does not recite any additional elements that integrate the abstract idea into a practical application.

#### Revised Guidance Step 2B

In Prong Two of Step 2B, we evaluate the additional limitations of claim 1, both individually and as an ordered combination, to determine whether they provide an inventive concept.

Relevant to this part of the eligibility analysis, Appellant “submits that generating a computerized mapping product at least in part by enriching venue data based on ‘*application launch data*,’ is not a well-understood, routine, or conventional activity in the field of mapping.” Appeal Br. 19 (quoting claim 1). However, “[i]t has been clear since *Alice* that a claimed invention’s use of [an] ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’

than that ineligible concept.” *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Compliance with the novelty requirement of § 102 does not mean that a claim is patent-eligible under § 101. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“But, a claim for a *new* abstract idea is still an abstract idea.”); *Versata*, 793 F.3d at 1335 (holding claims that improved an abstract idea but did not recite the supposed computer improvements were not patent eligible); *see also* Revised Guidance, 84 Fed. Reg. at 55 n.24 (“additional elements” are claim features *beyond* the identified judicial exception).

For the foregoing reasons, we affirm the rejection of claim 1 under the judicial exception to § 101, as well as that of claims 2–9 and 12–14, which fall therewith.

*Independent Claim 15 and  
Dependent Claims 16–23 and 26–28*

Appellant argues against the rejection of claims 15–23 and 26–28 solely on the basis that they recite (or incorporate through dependency) “similar subject matter as in claim 1.” Appeal Br. 20. For reasons similar to claim 1, we likewise affirm the rejection of claims 15–23 and 26–28.

*Independent Claim 29 and  
Dependent Claims 30–37 and 40–42*

Appellant argues against the rejection of claims 29–37 and 40–42 solely on the basis that they recite (or incorporate through dependency) “similar subject matter as in claim 1.” Appeal Br. 21. For reasons similar to claim 1, we likewise affirm the rejection of claims 29–37 and 40–42.

*Dependent Claims 10, 24, and 38*

Claims 10, 24, and 38 recite:

wherein adding information to the venue data comprises:  
determining, from the probe data, that mobile devices  
switch on satellite navigation subsystems of the mobile devices  
at a portion of the physical structure;  
in response, determining that the portion of the physical  
structure is exposed space; and  
adding a record of the exposed space to the venue data.

Appeal Br. 32–33, 37, 42.

Under Step 2A, Prong Two of the Revised Guidance, Appellant argues that these additional elements “improve[] a computerized mapping system.” Appeal Br. 22. Appellant, however, does not identify any meaningful improvement to the functioning of the computer or other technological improvement. Rather, Appellant implies that the efficiency obtained by using a computer in lieu of a human to process and/or update information makes the claims eligible. *See id.* (“Absent this specific rule, computerized mapping products could not be generated in a similarly efficient manner without human intervention.”). That argument is inconsistent with the law because using computers to automate manual activities or perform activities more quickly is not an inventive step. *See, e.g., Mortg.*, 811 F.3d at 1324 (holding that computer-implemented method for “anonymous loan shopping” was an abstract idea because it could be “performed by humans without a computer”); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (US.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more

efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”).

Also under Step 2A, Prong Two of the Revised Guidance, Appellant argues that these “claims are directed to solving problems *specific to computer technology* using processes that are also *specific to computer technology* (e.g., creating a computerized mapping product by identifying exposed spaces in a physical structure based the ‘switch[ing] on satellite navigation subsystems of... mobile devices at a portion of the physical structure’).” Appeal Br. 23. But, as the Examiner points out, these additional limitations merely narrow the abstract idea of, for example, claim 1’s enriching venue map data based on user survey data. Ans. 6. Thus, they do not qualify as additional elements *beyond* the abstract idea. *Id.* at 6–7; *see also* 84 Fed. Reg. at 55 n.24 (“additional elements” are claim features beyond the identified judicial exception). Further, as the Examiner also points out, these limitations merely indicate a field of use in which to apply the judicial exception. Ans. 7.

Under Step 2B of the Revised Guidance, Appellant argues the additional elements recited in these claims are “not well understood, routine, conventional activity in the field of mapping.” As stated above, however, “[i]t has been clear since *Alice* that a claimed invention’s use of [an] ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech*, 899 F.3d at 1290 .

For the foregoing reasons, we affirm the rejection of claims 10, 24, and 38.

*Dependent Claims 11, 25, 39, and 43*

Appellant argues against the rejection of these claims for reasons similar to that of claims 10, 24, and 38. And the Examiner similarly responds that Appellant's arguments again are based on limitations that merely narrow the abstract idea recited in the respective base claim and which do not reflect a technological improvement or tie the abstract idea to a particular machine. Ans. 7–8.

The Examiner again has the better position. For the foregoing reasons, we affirm the rejection of claims 11, 25, 39, and 43.

SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–43	101	Judicial Exception	1–43	

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**