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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* HAROLD ROY MILLER

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Appeal 2019-000776  
Application 14/530,484  
Technology Center 3600

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Before CARL W. WHITEHEAD JR., AMBER L. HAGY, and  
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

HAGY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–12, 16, 18, and 20–25, which are all of the pending claims. Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> 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 the applicant, Solution Technology Inc. Appeal Br. 2.

### CLAIMED SUBJECT MATTER

According to Appellant, the invention is directed to “data processing and, more particularly, to reaccommodating passengers during irregular operations.” Spec. ¶ 2. Appellant’s Specification notes that, in air transportation in particular, “irregular operations (IROPS) may be caused by weather conditions, flight delays, flight cancellations, and other events.” *Id.* ¶ 34. When these irregular operations occur, “passenger itineraries may be disrupted and alternative itineraries may be required.” *Id.* Appellant’s Specification purports to describe and claim “systems, methods, and media for reaccommodating of passengers in real time using a reaccommodation engine when a schedule of a transportation asset is affected.” *Id.* ¶ 35.

Claims 1, 12, and 20 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A method comprising:

establishing, by a computing device comprising memory and at least one hardware processor, a connection to a transportation system;

while the connection to the transportation system is established, receiving, by the computing device, transportation information from the transportation system;

based on the transportation information received from the transportation system, determining, by the computing device, at least one reaccommodation event associated with irregular operations of the transportation system;

determining, by the computing device, at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

receiving, by the computing device, a passenger record for the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations

of the transportation system, the passenger record including a communication address for a mobile device associated with the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

based on the passenger record for the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system, determining, by the computing device, whether to prioritize reaccommodation of the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

based on the determining whether to prioritize reaccommodation of the at least one passenger and based on the transportation information from the transportation system, generating, by the computing device, at least one reaccommodation option for the reaccommodation of the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

determining, from the passenger record for the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system, the communication address for the mobile device associated with the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

sending, by the computing device and to the communication address for the mobile device associated with the at least one passenger, a message including the at least one reaccommodation option for the reaccommodation of the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

receiving, by the computing device and from the mobile device associated with the at least one passenger, a selection from the at least one reaccommodation option for the

reaccommodation of the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system;

based on the selected at least one reaccommodation option, creating, by the computing device, a new transportation reservation in the transportation system for the at least one passenger; and

sending, by the computing device and to the communication address for the mobile device associated with the at least one passenger, a confirmation of the new transportation reservation.

#### REFERENCE

The prior art relied upon by the Examiner is:

<b>Name</b>	<b>Number</b>	<b>Date</b>
Sink et al. ("Sink")	US 2014/0257879 A1	Sept. 11, 2014

#### REJECTIONS<sup>2</sup>

Claims 1–12, 16, 18, and 20–25 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter (abstract idea). Final Act. 6–14.

Claims 1–12, 16, 18, and 20–25 stand rejected under 35 U.S.C. § 112(a) as failing to comply with the written description and enablement requirements. Final Act. 15–34.

Claims 1–12, 16, 18, and 20–25 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sink. Final Act. 35–55.

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<sup>2</sup> All rejections are under the provisions of Title 35 of the United States Code in effect after the effective date of the Leahy-Smith America Invents Act of 2011.

## OPINION

### *I. Section 101 Rejection*<sup>3</sup>

The Examiner rejects all of the pending claims under 35 U.S.C. § 101 on the basis that the claimed invention is patent-ineligible because it is directed to a judicial exception without significantly more. Final Act. 6–14. Appellant argues that the claims are not directed to an abstract idea, are directed to patent-eligible subject matter, and the Examiner’s rejection should be reversed. Appeal Br. 12–17. For the reasons explained below, we are not persuaded of error in the Examiner’s § 101 rejection and we, therefore, sustain that rejection.

#### *A. Principles of Law*

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has interpreted § 101 to include an 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) (citation omitted).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 75–77 (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*, 573 U.S. at

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<sup>3</sup> With regard to the Examiner’s § 101 rejection, Appellant argues all claims collectively with claim 1 (Appeal Br. 17), and we consider claim 1 to be representative of the claimed subject matter on appeal. *See* 37 C.F.R. § 41.37(c)(1)(iv).

217. The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 218–20. The “directed to” inquiry asks not whether “the claims *involve* a patent-ineligible concept,” but instead whether, “considered in light of the specification, . . . ‘their character as a whole is directed to excluded subject matter.’” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (internal citations omitted). In that regard, we determine whether the claims “focus on a specific means or method that improves the relevant technology” or are “directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016).

If, at the first stage of the *Alice* analysis, we conclude that the claims are not directed to a patent-ineligible concept, they are considered patent eligible under § 101 and the inquiry ends. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1047 (Fed. Cir. 2016).

If the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78). 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.* at 217–18 (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73). The prohibition against patenting an abstract idea “‘cannot be circumvented by attempting to limit the use of the formula to a particular technological environment’ or adding ‘insignificant postsolution activity.’” *Bilski v. Kappos*, 561 U.S. 593, 610–11 (2010) (internal citation omitted).

The Patent and Trademark Office (the “Office”) has published revised guidance on the application of 35 U.S.C. § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50–57 (Jan. 7, 2019) (“2019 Guidance”). Under the 2019 Guidance, the Office first looks to whether the claim recites: (1) 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); and (2) additional elements that integrate the judicial exception into a practical application. *See* 2019 Guidance at 52, 54–55; *see also* MPEP § 2106.05(a)–(c), (e)–(h).<sup>4</sup>

Only if a claim (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, does the Office then look to whether the claim: (3) adds a specific limitation beyond the judicial exception that are 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* 2019 Guidance at 56. We follow this framework in our analysis herein.

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<sup>4</sup> Unless otherwise specified herein, all references to the MPEP are to Rev. 08.2017 (Jan. 2018).

*B. Application of Legal Principles*

*1. Step One of Alice / 2019 Guidance*

Prong 1: Whether the Claims Recite an Abstract Idea

In applying the framework set out in *Alice*, and as the first step of that analysis, the Examiner concludes claim 1 recites the abstract idea of “rescheduling or reaccommodating passengers resulting from an airline disruption.” Final Act. 6 (emphasis omitted). The Examiner concludes that this abstract idea falls under the category of “Certain Methods of Organizing Human Activity,” which, in the July 2015 Update applied by the Examiner,<sup>5</sup> includes “concepts relating to interpersonal and intrapersonal activities, such as managing relationships or transactions between people, social activities, and human behavior . . . .” *Id.* at 7 (citing July 2015 Update at 4). The Examiner determines that “[t]he rescheduling or re-accommodating [of] passengers is an organizing of human activity as to how passengers can be rescheduled (i.e. re-accommodated into an airline schedule).” *Id.* at 7–8.

In challenging the Examiner’s determination that the claims recite an abstract idea, Appellant does not ostensibly disagree with the Examiner’s characterization, but argues that the Examiner’s interpretation does not “align” with any then-existing cases in which claims were determined to be ineligible as directed to “certain methods of organizing human activity.” Appeal Br. 13 (citing MPEP § 2106.04(a)(2)(II)(A)). Appellant then contends: “Because the alleged abstract idea is not similar to any abstract idea identified by the courts as an ineligible abstract idea, and because the

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<sup>5</sup> July 2015 Update: Subject Matter Eligibility, available at <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf> (“July 2015 Update”).

Examiner has failed to identify any court case rejecting as ineligible the alleged abstract idea, the rejection under 35 U.S.C. [§] 101 is deficient, should be withdrawn, and is appealed at least based on this reason.” *Id.* at 13–14; *see also* Reply Br. 19.

We disagree that the Examiner has failed to apply the proper analysis. In rejecting the claims under § 101, the Examiner analyzes the claims using the *Mayo/Alice* two-step framework. Specifically, the Examiner looks to the intrinsic evidence of the claim language and the recited limitations in determining that the claims, as a whole, are directed to the abstract idea of rescheduling or reaccommodating passengers resulting from an airline disruption. *See* Final Act. 6–12. Although the Examiner does not recite the precise cases wherein the court found similar ideas to be abstract (*see id.*), the Examiner cites to the July 2015 Update at 4, which includes examples of “Certain Methods of Organizing Human Activity” with cites to cases (*id.* at 7).

Thus, the Examiner clearly articulates the reasons why the claims are directed to an abstract idea and notifies the Appellant of the reasons for the rejection “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” 35 U.S.C. § 132. In doing so, the Examiner sets forth a prima facie case of unpatentability. *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011); 2015 July Update 6 (“[T]he examiner’s burden is met by clearly articulating the reason(s) why the claimed invention is not eligible, for example by providing a reasoned rationale that identifies the judicial exception recited in the claim and why it is considered an exception, and that identifies the additional elements in the claim (if any) and explains why they do not

amount to significantly more than the exception”); *see also* October 2019 Update: Subject Matter Eligibility (“October 2019 Update”)<sup>6</sup> at 15–16.

The Examiner’s analysis of the abstract idea is also consistent with the most recent 2019 Guidance, which uses enumerated groupings of abstract ideas that are rooted in Supreme Court precedent as well as Federal Circuit decisions interpreting that precedent. *See* 2019 Guidance at 51–52; *see also* October 2019 Update at 2. By grouping the abstract ideas, the 2019 Guidance synthesizes the holdings of various court decisions to facilitate examination. The 2019 Guidance describes “[c]ertain methods of organizing human activity” in terms similar to the definition applied by the Examiner, including reference to “commercial or legal interactions.” 2019 Guidance at 52. The October 2019 Update provides additional clarification on “Certain Methods of Organizing Human Activity,” confirming that “not all methods of organizing human activity are abstract ideas,” while also confirming that the category include activities that are “commercial or legal interactions.” October 2019 Update at 4–5. In turn, “commercial interactions” or “legal interactions” include “subject matter relating to agreements in the form of contracts, legal obligations, advertising, marketing or sales activities or behaviors, and business relations.” *Id.* at 5.

Claim 1 recites rescheduling or reaccommodating passengers resulting from an airline disruption by reciting: “determining . . . at least one reaccommodation event associated with irregular operations of the transportation system”; “determining . . . at least one passenger affected . . .”; “receiving . . . a passenger record . . .” and “based on the passenger

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<sup>6</sup> Available at [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) (October 17, 2019).

record . . . determining . . . whether to prioritize reaccommodation of the at least one passenger”; based on that determination, “determining . . . at least one reaccommodation option . . .”; “sending . . . a message including the at least one reaccommodation option” to the passenger’s mobile device communication address; “receiving . . . a selection” of a reaccommodation option; creating a “new transportation reservation”; and “sending . . . confirmation of the new transportation reservation” to the passenger’s mobile device communication address.

We agree with the Examiner that the claims recite a commercial interaction in terms of, at least, business relations; that is, a “transportation system” (e.g., airline) rescheduling or reaccommodating passengers (customers of the airline) resulting from an airline disruption. *See* Final Act. 6–8; *see also* 2019 Guidance at 52; October 2019 Update at 5–6. In particular, passengers who have purchased an airline ticket are in a commercial (and, indeed, contractual) relationship with the airline. Airline disruptions affect that relationship by interfering with the airline’s ability to provide the service to the customer as agreed. As Appellant’s Specification notes, these disruptions have potential “financial consequences” to the airline. Spec. ¶ 38. Appellant’s claims are directed to reaccommodating passengers in the event of such disruptions, and Appellant’s Specification notes that different options may have different financial consequences for the airline. *Id.* ¶¶ 39–43. Appellant’s Specification further notes that certain passengers may be prioritized in their reaccommodation (*id.* ¶ 49 (noting factors, such as “VIP” status, for prioritization)). Thus, Appellant’s claims provide a business solution (reaccommodation of transportation passengers, including according to passenger priority status) to a business problem

(inability of an airline to provide scheduled service to a passenger). As such, Appellant’s claims are directed to commercial interactions, which qualify as a certain method of organizing human activity and, thus, as an abstract idea.

Thus, under prong 1 of Step 2A in accordance with the 2019 Guidance, we agree with the Examiner’s conclusions that the claims recite an abstract idea. We turn now to prong 2.

Prong 2: Whether the Claims Integrate the Abstract  
Idea Into a Practical Application<sup>7</sup>

In accordance with prong 2 of Step 2A of the 2019 Guidance, we evaluate claims to determine whether they recite additional elements beyond the abstract idea, and, if so, we evaluate the additional elements to determine whether they integrate the abstract idea into a practical application. 2019 Guidance at 54. The 2019 Guidance at page 55 provides exemplary considerations, including whether an additional element:

- “reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field”;
- “implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim”;
- “effects a transformation or reduction of a particular article [or thing] to a different state or thing”; or

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<sup>7</sup> We acknowledge that some of these considerations may be properly evaluated under the second step of *Alice* (Step 2B of Office Guidance as identified in the 2019 Guidance). Solely for purposes of maintaining consistent treatment within the Office, we evaluate them under the first step of *Alice* (Step 2A of Office Guidance as identified in the 2019 Guidance). See 2019 Guidance at 54–55.

- “applies or uses the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment.”

The 2019 Guidance also highlights certain examples in which courts have held that “a judicial exception has *not* been integrated into a practical application,” such as where the claims “merely use[] a computer as a tool to perform an abstract idea” or the additional element adds “insignificant extra-solution activity” to the abstract idea. 2019 Guidance at 55 (emphasis added); *see also* October 2019 Update at 11–15.

The Examiner determines:

The claims are not directed to improving the operation of a computer and do not recite any such benefit. Rather the claims are directed to improving the reaccommodation of persons affected by irregular airline operations (e.g. delayed or cancelled flights) and merely use a computer to improve the performance of that determination—not the performance of a computer.

Final Act. 3; *see also id.* at 11–12.

We agree. Although Appellant apparently argued prior to appeal that the claims provide “technical benefits rooted in computer technology” (*see* Final Act. 3 (quoting Appellant argument)), Appellant does not advance that argument on appeal. Nor would such an argument be persuasive. As noted above, Appellant’s invention is directed to the *business problem* of reaccommodating passengers due to irregular operations of the transportation system, and is directed to the *business solution* of providing reaccommodation options to passengers on a prioritized basis—a process in which a computer is used as a tool in its ordinary capacity. *See also* Final Act. 11–12.

We find the steps beyond the recited abstract idea, such as “establishing . . . a connection to a transportation system” and “receiving” and “sending” certain information by a “computing device” and a “mobile device,” are directed to insignificant extra-solution activity. As our reviewing court has explained, such data gathering and transmission simply provide data for other method steps. *See, e.g. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011) (“We have held that mere ‘[data-gathering] step[s] cannot make an otherwise nonstatutory claim statutory.’” (alterations in original) (quoting *In re Grams*, 888 F.2d 835, 840 (Fed. Cir. 1989))); *see also* 2019 Guidance at 55 (identifying “add[ing] insignificant extrasolution activity to the” abstract idea as an example of when an abstract idea has not been integrated into a practical application).

Consistent with the Examiner’s determination, we determine the claims do not include an improvement to another technology or technical field or an improvement to the functioning of the computer itself; we also find the claims do not include a transformation of an article or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment. *See* Final Act. 11–14. As the Supreme Court has explained, “if a patent’s recitation of a computer amounts to a mere instruction to ‘implemen[t]’ an abstract idea ‘on . . . a computer,’ that addition cannot impart patent eligibility.” *Alice*, 573 U.S. at 223 (quoting *Mayo*, 566 U.S. at 84).

In summary, we conclude the claims do not integrate the abstract idea into a practical application sufficiently to remove them from the realm of reciting patent-ineligible abstract ideas. Accordingly, in step one of the *Alice* analysis, we conclude the claims are directed to an abstract idea.

2. *Step Two of Alice / 2019 Guidance*

Regarding step two of the *Alice* analysis, the Examiner finds the elements of the claims, when considered individually or in combination, do not recite significantly *more* than the abstract idea. Final Act. 8–13. In particular, the Examiner finds:

Since the use of a computer to gather data such as claimed to process and manipulate it (process it, display a result and receive further input) is routine and conventional in the computer arts, the implementation of the abstract idea on a computer does not provide significantly more. Additionally the use of communication or computer devices, including using mobile devices, to send data back and forth, including using a communication address (e.g. email address) is routine and conventional these limitations do not provide significantly more.

Final Act. 8. In the Answer, the Examiner additionally sets forth evidence that “computer processing of airline reservations and communication with passengers is routine and well-known.” Ans. 7–14 (setting forth evidence of Sabre airline reservation management system).

Appellant argues that the Examiner’s “generic discussion does not fulfill the required step-2B analysis,” and insists that claim 1 “recites significantly more than merely ‘storing and retrieving information in memory.’” Appeal Br. 15. Appellant then recites the entirety of claim 1. *Id.* at 15–16. Missing from Appellant’s argument, however, is any identification of which elements in claim 1 are *additional elements beyond the abstract idea*. The analysis in the second step of *Alice* does not consider whether the limitations that are part of the recited abstract idea are routine or well-known. As the Federal Circuit has explained, patent law does not

protect abstract ideas, “no matter how groundbreaking the advance.” *SAP America, Inc. v. Investpic LLC*, 898 F.3d 1161, 1170 (Fed. Cir. 2018). What is necessary to impart patent eligibility for a claim that recites an abstract idea is a *specific limitation beyond the judicial exception* that is not well-understood, routine, and conventional.

Examiner addresses the limitations of the claims that are arguably beyond the recitation of the abstract idea (i.e., establishing a connection by a computing device, and generating, sending, and receiving data in the form of reaccommodation options), and finds that those limitations amount to routine and conventional data processing and communication using generic computing devices. Final Act. 8, 11–14. Appellant does not address these findings by the Examiner other than to assert, incorrectly, that they fail to fulfill the required analysis. *See generally* Appeal Br. 14–17. For the reasons stated above, we disagree, and hence we are not persuaded of Examiner error.

Accordingly, for the reasons discussed above, we sustain the Examiner’s rejection of claim 1 under 35 U.S.C. § 101 as patent-ineligible. For the same reasons, we also sustain the rejection of claims 2–12, 16, 18, and 20–25, which are not separately argued, as patent-ineligible under 35 U.S.C. § 101. *See* Appeal Br. 17.

## *II. Section 112(a) Rejections*

The Examiner rejects all pending claims under 35 U.S.C. § 112(a) as failing to comply with the written description and enablement requirements. Final Act. 15–34. In particular, the Examiner finds the recitation in claim 1<sup>8</sup>

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<sup>8</sup> Although the Examiner purports to reject all of the claims (claims 1–12, 16, 18, and 20–25) under § 112, the Examiner discusses only claim 1. Final

of “whether to prioritize” customers lacks written description and enablement support in the Specification. *Id.* at 16.

Claim 1 recites, in relevant part:

based on the passenger record for the at least one passenger affected by the at least one reaccommodation event associated with the irregular operations of the transportation system, *determining, by the computing device, whether to prioritize reaccommodation of the at least one passenger affected by the at least one reaccommodation event* associated with the irregular operations of the transportation system . . . .

Appeal Br. 32 (Claims App’x) (emphasis added). As the Examiner acknowledges, the Specification discusses “predefined rules” for reaccommodation events and also discusses “prioritization,” but does not explain all of the “large variety of ways” customers could be scored or prioritized. Final Act. 16–18 (citing Spec. ¶ 37).

We first address the Examiner’s rejection for lack of written description. “The ‘written description’ requirement serves a teaching function, . . . in which the public is given ‘meaningful disclosure in exchange for being excluded from practicing the invention for a limited period of time.’” *Univ. of Rochester v. G.D. Searle & Co., Inc.*, 358 F.3d 916, 922 (Fed. Cir. 2004) (citation omitted). Another “purpose of the ‘written description’ requirement is . . . [to] convey with reasonable clarity to those skilled in the art that, as of the filing date [], [the applicant] was in possession of the invention.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555,

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Act. 15. We interpret the Examiner’s analysis of the “whether to prioritize” limitation in independent claim 1 to apply also to the similar recitations in independent claims 12 and 20, and hence also to all dependent claims.

1563–64 (Fed. Cir. 1991); *see also Enzo Biochem Inc. v. GenProbe Inc.*, 296 F.3d 1316, 1329 (Fed. Cir. 2002). The requirement is satisfied when the specification “set[s] forth enough detail to allow a person of ordinary skill in the art to understand what is claimed and to recognize that the inventor invented what is claimed.” *Univ. of Rochester*, 358 F.3d at 928.

We are persuaded of Examiner error in the rejection under § 112(a) for lack of written description. As Appellant argues, and we agree, the Specification describes prioritization of passengers according to several exemplary factors, including whether the passenger is a VIP or is in danger of missing a connection. Appeal Br. 17–18; Spec. ¶¶ 37, 49. Indeed, the Examiner concedes the Specification “provides verbatim support for how customers or passengers affected by airline flight operation disruptions would be prioritized.” Final Act. 17. The Examiner takes issue, however, with the fact that “[t]here is a large variety of ways customers could be scored or prioritized,” and notes that the Specification does not describe all those ways. *See id.* at 18. Although the Specification may not predict and describe every possible factor or scheme for passenger prioritization, such is not required to satisfy the written description requirement. As the Federal Circuit has explained, “our case law is clear that an applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention.” *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1344 (Fed. Cir. 2001) (citing *SRI Int’l v. Matsushita Elec. Corp. of America*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc)). Here, we agree with Appellant that the Specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, Appellant was in possession of the invention as now claimed, including “determining . . .

whether to prioritize reaccommodation,” as recited in independent claim 1 and commensurately recited in independent claims 12 and 20. We, therefore, do not sustain the Examiner’s 35 U.S.C. § 112(a) rejection for lack of written description.

As for enablement, the Federal Circuit has explained that satisfying the enablement requirement requires that “one skilled in the art, after reading their disclosures, could practice the invention . . . without undue experimentation.” *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004). The Federal Circuit noted that simply because some experimentation is necessary “does not preclude enablement; what is required is that the amount of experimentation ‘must not be unduly extensive.’” *Id.* The Federal Circuit further clarified that while the full scope of the claim must be enabled,

[t]hat is not to say that the specification itself must necessarily describe how to make and use every possible variant of the claimed invention, for the artisan’s knowledge of the prior art and routine experimentation can often fill gaps, interpolate between embodiments, and perhaps even extrapolate beyond disclosed embodiments, depending upon the predictability of the art.

*Id.*

For reasons similar to those noted above, and for the reasons argued by Appellant, we are also persuaded of Examiner error in the rejection of the pending claims for lack of enablement. *See* Appeal Br. 17–19; Reply Br. 1–4. The Examiner does not dispute that the Specification enables at least some embodiments of determining passenger prioritization, but asserts it does not explain every possible way of carrying out the prioritization. *See* Final Act. 17–18. Enablement of every conceivable variation is not

required, however. *See Chiron Corp.*, 363 F.3d at 1253. Moreover, as discussed above in connection with the rejection under § 101, the Examiner finds (and we agree) that the limitations of the claims beyond the abstract idea do not require more than well-understood, routine, and conventional technology. *See* Final Act. 8. The Examiner does not explain how the ordinarily skilled artisan could, using such conventional technology, apply some factors (as disclosed in the Specification) in determining passenger prioritization, but would be required to engage in undue experimentation to apply other factors. We, therefore, do not sustain the Examiner’s 35 U.S.C. § 112(a) rejection of claims 1–12, 16, 18, and 20–25 for lack of enablement.

*III. Section 103 Rejection*<sup>9</sup>

The Examiner rejects claims 1–12, 16, 18, and 20–25 as obvious over Sink. Final Act. 35–55.

Appellant argues the Examiner’s rejection is in error for several reasons. We deem persuasive Appellant’s arguments that Sink fails to disclose at least two limitations: “sending, by the computing device and to the communication address for the mobile device associated with the at least one passenger, a message including the at least one reaccommodation option . . .”; and “receiving, by the computing device and from the mobile device associated with the at least one passenger, a selection from the at least one reaccommodation option . . .” Appeal Br. 22–29.

Sink discloses an online reservation system in which, when a traveler’s preferred accommodation is not available, the traveler may place a

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<sup>9</sup> With regard to the Examiner’s § 103 rejection, Appellant argues all claims collectively with claim 1 (Appeal Br. 30), and we consider claim 1 to be

request to be waitlisted for the preferred accommodation. Sink ¶ 3. If and when the preferred accommodation does become available, the traveler is assigned to that accommodation “without any intervention by the traveler.” *Id.* ¶ 6. The traveler is then notified of the preferred accommodation assignment. *Id.* Sink emphasizes that this reassignment is automatic, and further notes that it may be based on prioritization:

The traveler does not have to periodically check back with the travel accommodation provider for the possible availability of their preferred accommodation, hoping that they get lucky and happen to check back right at the moment when the preferred accommodation is available. The traveler is evaluated for the preferred accommodation based on passenger value parameters defined by the carrier, and is able to obtain the preferred accommodation first, based on relative ranking to other travelers. The disclosed system and methods eliminate the need for any traveler intervention and significantly improves the chances of the travel being assigned their preferred accommodation.

*Id.* The fact that reassignment is “automatic” without requiring any intervention by the traveler is emphasized throughout Sink. Sink explains that one benefit of the automatic reassignment is that the alternative accommodation originally chosen by the traveler will be freed up for possibly assignment by the reservation system to another traveler. *Id.* ¶ 26.

In mapping the disclosures of Sink to claim 1, the Examiner finds Sink teaches “a communication address for a mobile device associated with the at least one passenger” by disclosing that the system stores a passenger’s

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representative of the claimed subject matter on appeal. *See* 37 C.F.R. § 41.37(c)(1)(iv).

email address, which the system will use to notify the customer in the event of a seat reassignment. Final Act. 15 (citing Sink ¶ 7, Fig. 5). We agree with that finding. Sink discloses repeatedly that a passenger is notified, such as through email, in the event of reassignment. E.g., Sink ¶ 6. With regard to the limitations of “sending . . . at least one reaccommodation option” from the computing device to the passenger’s communication address and “receiving . . . a selection” by the computing device from the passenger’s mobile device, however, the Examiner does not point to any disclosure in Sink supporting a finding of such an exchange. Rather, the Examiner relies on Sink’s disclosure of a passenger making a waitlist selection. Final Act. 40–41. Sink discloses that this waitlist selection may be made by a passenger when making a reservation. E.g., Sink ¶ 30 and Figs. 1–3 (disclosing a passenger accessing a “travel accommodation assignment interface” and having an option to select a seat and a waitlist option for a preferred seat). Sink does not disclose, however, that the system *sends a message* to the passenger’s “communication address” (e.g., email) with a reaccommodation option, nor does Sink disclose that the system receives from the passenger a selection *in response to that message*, as recited in the claims. Rather, as noted above, Sink repeatedly emphasizes that the reassignment of the passenger to a waitlisted preferred seat is done automatically, without passenger intervention. Sink ¶ 7. The Examiner’s analysis in the Answer only further underscores this deficiency in the Examiner’s findings, as the Examiner reiterates reliance on Figure 5 of Sink, in which a passenger may, using the airline’s website, select an option to be waitlisted. *See* Ans. 16–17. Again, nothing in Figure 5 (or in the corresponding disclosure of Sink) suggests that the airline *sends a message*

to the passenger's communication address with options that the passenger then selects. Rather, as noted above, Sink repeatedly emphasizes that the reassignment is automatic, and the passenger is passively notified only if and when reassignment has already occurred. E.g., Sink ¶ 7.

In short, a key difference between Sink's teachings and the claimed invention is that Sink discloses the passenger choosing a preferred seat in advance by way of a waitlist selection, and then awaiting notification of whether the preferred seat is later automatically assigned to the passenger. The claimed invention, in contrast, requires the transportation system to send a message to the passenger's designated communication address with one or more reaccommodation options, and the passenger must then affirmatively choose an option before reaccommodation will occur.

On this record, we do not have sufficient evidence or findings that sending reaccommodation options to the passenger and requiring affirmative selection by the passenger are merely obvious advances over the cited prior art, which teaches that reaccommodation is done automatically without passenger intervention. We note Appellant's contentions present additional issues. Because the identified issue is dispositive of Appellant's arguments on appeal with regard to the Examiner's § 103 rejection, we do not reach the additional contentions. On this record, therefore, we are constrained to reverse the Examiner's 35 U.S.C. § 103 rejection of independent claim 1, and also of independent claims 12 and 20, which contain commensurate limitations. The dependent claims stand with their respective independent claims.

**CONCLUSION**

The Examiner’s decision to reject claims 1–12, 16, 18, and 20–25 is affirmed.

More specifically:

The Examiner’s rejection of claims 1–12, 16, 18, and 20–25 under 35 U.S.C. § 101 (patent ineligible / abstract idea) is affirmed.

The Examiner’s rejections of claims 1–12, 16, 18, and 20–25 under 35 U.S.C. § 112(a) for lack of written description and lack of enablement are reversed.

The Examiner’s rejection of claims 1–12, 16, 18, and 20–25 under 35 U.S.C. § 103 as unpatentable over Sink is reversed.

**DECISION SUMMARY**

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–12, 16, 18, and 20–25	101	Eligibility	1–12, 16, 18, and 20–25	
1–12, 16, 18, and 20–25	112(a)	Written Description / Enablement		1–12, 16, 18, and 20–25
1–12, 16, 18, and 20–25	103	Sink		1–12, 16, 18, and 20–25
<b>OVERALL OUTCOME</b>			1–12, 16, 18, and 20–25	

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Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

#### TIME PERIOD FOR 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