APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/291,237	05/30/2014	Denis Boulanger	PT1173US00	1114

132326   7590   10/25/2019

Thompson Hine LLP
10050 Innovation Drive
Suite 400
Dayton, OH 45342-4934

EXAMINER
JOSEPH, TONYA S

ART UNIT	PAPER NUMBER
3628	

NOTIFICATION DATE	DELIVERY MODE
10/25/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@thompsonhine.com

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

Ex parte DENIS BOULANGER, LUC CHOUBERT, RAPHAEL SABAN,
and MATHIEU CHAN NOON CHUNG

_____

Appeal 2019-000596
Application 14/291,237
Technology Center 3600

_____

Before DANIEL N. FISHMAN, ADAM J. PYONIN, and MELISSA A.
HAAPALA, *Administrative Patent Judges.*

PYONIN, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the

Examiner's rejection. 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 Amadeus
S.A.S. Br. 3.

STATEMENT OF THE CASE

Introduction

The Application is directed to "assigning seats of passenger-transport vehicles to passengers." Spec. ¶ 1. Claims 1, 3–9, and 11–17 are pending; claims 1, 9, and 17 are independent. Br. 3. Claim 1 is reproduced below for reference (emphasis added):

> 1.   A method comprising:
> identifying unoccupied seats on a passenger-transport vehicle;
> accessing a reservation database to retrieve data indicative of existing bookings associated with the passenger-transport vehicle;
> partitioning passengers, based on the data indicative of existing bookings, into passengers seated by a reservation link resulting from an existing booking and remaining passengers not seated by a reservation link resulting from an existing booking;
> obtaining social-network relation data for the remaining passengers from a social network database;
> subdividing, by a processor, the remaining passengers into a plurality of groups, each group among the plurality of groups including a sub-set of the passengers having at least one social-network relation in common based on the social-network relation data, *each passenger among the sub-set of the passengers in each group having less than a maximum number of social-network relations to other passengers outside of that group based on the social-network relation data, wherein the passengers are subdivided into the plurality of groups such that breaks of the social-network relations between the passengers are minimized when the passengers are subdivided into the groups*;
> identifying an excluded passenger among the remaining passengers, the excluded passenger not included in any group among the plurality of groups upon subdividing the remaining passengers;
> determining, by the processor, one group among the plurality of groups that includes at least one remaining passenger having at least one of the social-network relations in common

with the excluded passenger based on the social-network relation data;

      adding the excluded passenger to the one group that includes the at least one remaining passenger having at least one social-network relation in common with the excluded passenger; and

      allocating the unoccupied seats to the remaining passengers based on the plurality of groups.

Rejections

Claim 1 is rejected under 35 U.S.C. § 112(b), as being indefinite. Final Act. 5.

Claims 1, 3–9, and 11–17 are rejected under 35 U.S.C. § 101 as being patent ineligible. Final Act. 3; Advisory Act. 1.

OPINION

We have reviewed the Examiner's rejections in light of Appellant's arguments. Arguments Appellant could have made but chose not to make are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017). We discuss each of the statutory grounds of rejection in turn, below.

Indefiniteness

The Examiner rejects claim 1 as failing to particularly point out and distinctly claim the subject matter:

Claim 1 still recites the limitations regarding, *subdividing, by a processor … each group are connected by social-network relations and have <u>less than a maximum number of social-network relations to other passengers outside of that group …</u> <u>breaks of the social-network relations between the passengers are minimized when the passengers are subdivided into the</u>*

groups; The plain meaning of the underlined portions **remain unclear**.

Final Act. 5.

Appellant argues the Examiner errs, because the rejection provides no reasoning why each of the claims would be indefinite. Br. 22. Appellant further argues "the current indefiniteness rejection is both legally and factually deficient," and "one skilled in the art would be reasonably apprised of the scope of the claimed invention with the benefit of Appellant's specification." Br. 23 (citing Spec. ¶¶ 22–25, 29, 32, 41, 42).

We agree with Appellant's arguments. The Examiner has provided no analysis other than the bare assertion that the quoted claim portion is "unclear." Final Act. 5; *see also* Ans. 5. Such analysis is insufficient to support a rejection. *See* MPEP § 2173.02 (9th ed., rev. 08.2017 (Jan. 2018)) ("[T]he examiner should clearly communicate in an Office action any findings and reasons which support the rejection and avoid a mere conclusion that the claim term or phrase is indefinite."). Additionally, Appellant persuades us that one of ordinary skill in the art "would understand what is claimed when the claim is read in light of the specification." *Id.*; Br. 23; *see also* Spec. ¶ 25 ("[B]reaking a relation means cutting an edge in the graph corresponding to that relation. After seat assignment, those broken relations may result in (former) related passengers being seated spatially apart from each other."); ¶ 33 ("The most suitable group assignment for non-included [passengers] . . . is the group assignment that breaks the fewest connections between [passengers] . . . .").

Accordingly, we do not sustain the Examiner's indefiniteness rejection of independent claim 1.

Patent Eligibility

The Examiner determines the claims are patent ineligible under 35 U.S.C. § 101, 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. 3; *see also Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014) (Describing the two-step framework "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.").

After the docketing of this Appeal, the USPTO published revised guidance on the application of § 101. *See* USPTO's 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Memorandum"). Under Step 2A of the guidance, the office looks to whether the claim recites:

> (1) Prong One: 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) Prong Two: 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, does the Office then look, under Step 2B, 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, 84 Fed. Reg. at 56.

We are not persuaded the Examiner's rejection is in error. We adopt
the Examiner's eligibility findings and conclusions as our own, and we add
the following primarily for emphasis and clarification with respect to the
guidance.

A.   *Step 2A, Prong One*

We agree with Appellant "the claimed invention is directed towards a
particular technique of allocating unoccupied seats on a passenger-transport
vehicle to passengers not seated by a reservation link resulting from an
existing booking." Br. 15. We determine that claim 1 recites an abstract
concept pursuant to the guidance. *See* Final Act. 3–4. Particularly, Claim 1
includes limitations that we determine recite judicial exceptions pursuant to
the guidance, as discussed herein.

Claim 1 recites the following limitations regarding obtaining
information and identifying seats and passengers as part of the "particular
seat assignment process" (Br. 15):

> identifying unoccupied seats on a passenger-transport
> vehicle;
> accessing a reservation database to retrieve data indicative
> of existing bookings associated with the passenger-transport
> vehicle;
> . . .
> obtaining social-network relation data for the remaining
> passengers from a social network database;
> . . .

identifying an excluded passenger among the remaining passengers, the excluded passenger not included in any group among the plurality of groups upon subdividing the remaining passengers.

These limitations are, pursuant to the guidance, concepts of "observation, evaluation," and are thus the abstract concept of "[m]ental processes." Memorandum, 84 Fed. Reg. at 52; *see also 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."). The limitations are also "business relations[,] . . . social activities, . . . and following rules or instructions," which are "commercial or legal interactions" and "managing personal behavior or relationships or interactions between people." Memorandum, 84 Fed. Reg. at 52. Pursuant to the guidance, the limitations are the abstract concept of "[c]ertain methods of organizing human activity." *Id.*

Claim 1 further recites the following limitations performed as part of the "particular seat assignment process" (Br. 15):

partitioning passengers, based on the data indicative of existing bookings, into passengers seated by a reservation link resulting from an existing booking and remaining passengers not seated by a reservation link resulting from an existing booking;
. . .

subdividing . . . the remaining passengers into a plurality of groups, each group among the plurality of groups including a sub-set of the passengers having at least one social-network relation in common based on the social-network relation data, each passenger among the sub-set of the passengers in each group having less than a maximum number of social-network relations to other passengers outside of that group based on the social-network relation data, wherein the passengers are

7

subdivided into the plurality of groups such that breaks of the social-network relations between the passengers are minimized when the passengers are subdivided into the groups;

. . .

determining . . . one group among the plurality of groups that includes at least one remaining passenger having at least one of the social-network relations in common with the excluded passenger based on the social-network relation data;

adding the excluded passenger to the one group that includes the at least one remaining passenger having at least one social-network relation in common with the excluded passenger; and

allocating the unoccupied seats to the remaining passengers based on the plurality of groups.

These limitations are, pursuant to the guidance, concepts of "observation, evaluation, judgement, opinion," and are the abstract concept of "[m]ental processes." Memorandum, 84 Fed. Reg. at 52. The limitations are also "business relations[,] . . . social activities, . . . and following rules or instructions," which are "commercial or legal interactions" and "managing personal behavior or relationships or interactions between people." Memorandum, 84 Fed. Reg. at 52. Pursuant to the guidance, the limitations are the abstract concept of "[c]ertain methods of organizing human activity." *Id*.

Accordingly, we agree with the Examiner that the claim recites an abstract idea under Prong One of the guidance. *Id*. at 52, 54; Final Act. 3; *cf. In re Maucorps*, 609 F.2d 481, 482 (CCPA 1979) (Determining a claimed algorithm for "optimizing the organization of sales representatives in a business" is not patent eligible.).

B.   *Step 2A, Prong Two*

Appellant contends the Examiner's eligibility rejection is in error, because "[a]t best, the Examiner has demonstrated that claim 1 *involves or relates* to a patent-ineligible concept" (Br. 14), but "the Examiner fails to consider the language of claim 1 pertaining to the claim elements related to the social-network relation data" (Br. 15). Particularly, Appellant contends the claim is not directed to an abstract concept, because "the claimed invention provides a solution that is . . . inextricably linked with an online social networking environment" (Br. 16) and saves "significant processing time and processing power" (Br. 21).

We are not persuaded the Examiner's rejection is insufficiently supported, or otherwise is in error, pursuant to Step 2A, Prong Two of the guidance. As discussed above, the social-network related limitations are part of the recited judicial exception. *See* Ans. 4. That is, the disputed limitations do not comprise additional element(s) imparting eligibility. *See* Memorandum, 84 Fed. Reg. at 55, n.24 ("USPTO guidance uses the term 'additional elements' to refer to claim features, limitations, and/or steps that are recited in the claim beyond the identified judicial exception.").

Other than the recited judicial exception, claim 1 requires a processor. We disagree with Appellant that the claim will provide "technical improvements over the prior art" (Br. 20), because the claim limitations merely uses the ordinary capabilities of a general-purpose computer. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) ("[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."); Memorandum 84 Fed. Reg. at 55 ("The courts

have also identified examples in which a judicial exception has not been integrated into a practical application: [] An additional element merely recites the words 'apply it' (or an equivalent) with the judicial exception.").

Accordingly, we determine claim 1 does not integrate the judicial exception into a practical application. *See* Memorandum, 84 Fed. Reg. at 54. As the "claim recites a judicial exception and fails to integrate the exception into a practical application" (*id*. at 51), "the claim is directed to the judicial exception" (*id*. at 54). *Cf. In re Morinville*, 767 F. App'x 964, 969 (Fed. Cir. 2019) ("[T]he Board correctly viewed claim 1[, being] directed to the general concept of reorganizing an organization in conformity with function . . . . and recit[ing] a computer 'merely as a tool,' is [therefore] a general abstract idea.").

C.   *Step 2B*

The Examiner determines the claimed additional elements comprise a "recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry." Final Act. 4. Appellant does not persuade us the Examiner is incorrect, as Appellant's arguments focus on the recited "computer-implemented functions" such as using social network data. Br. 19. As discussed above, such steps are part of the judicial exception rather than an additional element. *See* Memorandum, 84 Fed. Reg. at 56.

Pursuant to Step 2B of the guidance, we find the Examiner's analysis regarding the *additional elements* of the claims to be reasonable. *See* Ans. 4; *see also* Spec. ¶¶ 40, 64–69; *Alice*, 573 U.S. at 226. Accordingly, we are not

persuaded the Examiner errs in determining claim 1 does not include an inventive concept which amounts to significantly more than the exception itself.

We sustain the Examiner's patent eligibility rejection of independent claim 1, as well as independent claims 9 and 17, for which Appellant does not provide separate, substantive arguments. *See* Br. 18.

D.   *Dependent Claims*

Appellant argues the Examiner's eligibility rejection of the dependent claims is in error. *See* Br. 18. We are not persuaded of error. Contrary to Appellant's arguments, the Examiner addresses the dependent claims and concludes the claims do not remedy the deficiencies of the independent claims. *See* Final Act. 50; Ans. 4. We note Appellant does not attempt to explain why the Examiner's conclusions are not applicable to the dependent claims. *See* Br. 18. Accordingly, we sustain the Examiner's patent eligibility rejection of dependent claims 3–8 and 11–16.

CONCLUSION

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1	112(b)	Indefiniteness		1
1, 3–9, 11–17	101	Eligibility	1, 3–9, 11–17	
Overall Outcome			1, 3–9, 11–17	

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