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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL THOMAS PETRALIA and JOHN P. WALSH

Appeal 2019-001367
Application 12/746,445
Technology Center 3600

Before LARRY J. HUME, MELISSA A. HAAPALA, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner’s decision rejecting claims 1–3, 5–7, 9–14, 16, 18, and 20, which are all claims pending in the application. Appellant has canceled claims 4, 8, 15, 17, and 19. *See* Appeal Br. 10–13 (Claims App.). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Clever Devices. Appeal Br. 1.

STATEMENT OF THE CASE²

The claims are directed to a holistic multimodal transport apparatus and method. *See Spec. (Title)*. In particular, Appellant’s disclosed embodiments and claimed invention “relate[] generally to multi-modal transportation systems, and more particularly, to a multi-modal transportation system that provides an optimized transportation route through a correlation of a user's holistic transportation route goals and transit mode availability.” *Spec. 1, ll. 12–15*.

Exemplary Claims

Claim 1, reproduced below, is representative of the subject matter on appeal (*emphases* added to contested prior-art limitations):

1. A method for providing a transportation route to a user comprising the steps of:

collecting, by a transit information system, attribute information of a plurality of public transit modes through links to transit vehicles acting as traffic probes, *the attribute information of the plurality of public transit modes including a level of disabled user accessibility for each transit mode, which is calculated based on aggregated feedback from a plurality of users*;

providing, by an internet-enabled device, access for a user to a hardware-implemented routing system through an interface;

² Our decision relies upon Appellant’s Appeal Brief (“Appeal Br.,” filed June 15, 2018); Reply Brief (“Reply Br.,” filed Dec. 5, 2018); Examiner’s Answer (“Ans.,” mailed Oct. 5, 2018); Final Office Action (“Final Act.,” mailed Dec. 22, 2017); and the original Specification (“Spec.,” filed June 4, 2010) (ultimately claiming benefit of US 60/992,662, filed Dec. 5, 2007).

receiving, at the hardware-implemented routing system, travel information from the user through the interface of the internet-enabled device, a plurality of transportation route goals ranked in a specified order by the user through the interface of the internet-enabled device, attribute information of one or more personal transit modes owned by the user from the user through the interface of the internet-enabled device, the attribute information of the plurality of public transit modes from the transit information system, and attribute information of parking capacity and current parking availability for a personal transit mode at transit nodes;

storing, in the hardware-implemented routing system, the attribute information of the plurality of transit modes as real-time records of the attribute information;

determining, by the hardware-implemented routing system, an optimized transportation route for the user through a correlation of the plurality of ranked transportation route goals and the received attribute information of the one or more personal transit modes, the plurality of public transit modes, and parking capacity and current parking availability at viable transit nodes along potential routes, which correspond to the received travel information, wherein the transportation route comprises one or more transit modes from the one or more personal transit modes and the plurality of public transit modes; and

transmitting the optimized transportation route from the hardware-implemented routing system to the internet-enabled device of the user through the interface.

REFERENCES

The Examiner relies upon the following prior art as evidence:

Name	Reference	Date
Burgener	US 5,736,940	Apr. 7, 1998
Lee	US 2006/0178822 A1	Aug. 10, 2006
Hileman	US 2007/0073552 A1	Mar. 29, 2007
Speier et al. (“Speier”)	US 2009/0048771 A1	Feb. 19, 2009
Mundinger et al. (“Mundinger”)	US 2010/0228574 A1	Sept. 9, 2010
Reginald G. Golledge et al., “Public Transit Use by Non-Driving Disabled Persons: The Case of the Blind and Vision Impaired,” CALIFORNIA PATH PROGRAM INSTITUTE OF TRANSPORTATION STUDIES UNIVERSITY OF CALIORNIA, BERKELEY, Jan. 1996 (hereinafter “Golledge”).		

REJECTIONS

R1. Claims 1–3, 5–7,³ 9–14, 16, 18, and 20 stand rejected 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 abstract idea) without significantly more. Final Act. 2–4.

³ We note a typographical error in the explicit statement of Rejection R1 (Final Act. 2) that omits mention of dependent claim 6. However, the Examiner addresses Rejection R1 of claim 6 in the detailed rejection. *Compare* Final Act. 2 *with* Final Act. 4. Thus, for purposes of this Appeal, we include claim 6 in Rejection R1.

R2. Claims 1, 2, 7,⁴ and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Lee, Mundinger, Burgener, and Golledge. Final Act. 4–7.

R3. Claims 3, 5, 6, and 9–14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Lee, Mundinger, Burgener, Golledge, and Hileman. Final Act. 7–9.

R4. Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Lee, Mundinger, Burgener, Golledge, and Speier. Final Act. 9.

CLAIM GROUPING

Based on Appellant’s arguments (Appeal Br. 3–9) and our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the appeal of patent-ineligible subject matter Rejection R1 of claims 1–3, 5–7, 9–14, 16, 18, and 20 on the basis of representative claim 1; and we decide the appeal of obviousness Rejection R2 of claims 1, 2, 7, and 20 on the basis of representative claim 1.

Remaining claims 3, 5, 6, 9–14, and 16 in Rejections R3 and R4, not argued separately, stand or fall with the respective independent claim from which they depend.⁵

⁴ We note a typographical error in Rejection R2 of dependent claim 7, which is included in the rejection heading, but which is not addressed in the detailed rejection. Because claim 7 depends on claim 6, rejected under Rejection R3, it appears that claim 7 may have been more appropriately rejected under Rejection R3. However, Appellant did not separately argue the rejection of dependent claim 7, so that we proceed by grouping claim 7 with Rejection R2 of claim 1.

⁵ “Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together

ISSUES AND ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellant. To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv).

We disagree with Appellant's arguments with respect to claims 1–3, 5–7, 9–14, 16, 18, and 20, and, unless otherwise noted, we incorporate by reference herein and adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellant's arguments. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 101 Rejection R1 of Claims 1–3, 5–7, 9–14, 16, 18, and 20

Issue 1

Appellant argues (Appeal Br. 3–5; Reply Br. 1–3) the Examiner's rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately.” 37 C.F.R. § 41.37(c)(1)(iv). In addition, when Appellant does not separately argue the patentability of dependent claims, the claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

Under the USPTO’s Revised Guidance, informed by our governing case law concerning 35 U.S.C. § 101, is claim 1 patent-ineligible under § 101?

Principles of Law

A. 35 U.S.C. § 101

An invention is patent-eligible if it is a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101.⁶ However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[I]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (brackets in original) (citing *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (2014) (citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4

⁶ This threshold analysis of whether a claim is directed to one of the four statutory categories of invention, *i.e.*, a process, machine, manufacture, or composition of matter, is referred to as “*Step 1*” in the USPTO’s patent-eligibility analysis under § 101. MPEP § 2106.

in petitioners’ application explain the basic concept of hedging, or protecting against risk . . .”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diehr*, 450 U.S. at 191); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, and mathematical formulas or relationships. *Alice*, 573 U.S. at 217–21. Under this guidance, we must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful. *Id.* at 217 (“[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.”).

Examples of claims that do not recite mental processes because they cannot be practically performed in the human mind include: (a) a claim to a method for calculating an absolute position of a GPS receiver and an absolute time of reception of satellite signals, where the claimed GPS receiver calculated pseudoranges that estimated the distance from the GPS

receiver to a plurality of satellites, *SiRF Technology, Inc. v. International Trade Commission*, 601 F.3d 1319, 1331–33 (Fed. Cir. 2010); (b) a claim to detecting suspicious activity by using network monitors and analyzing network packets, *SRI Int’l, Inc. v. Cisco Systems, Inc.*, 930 F.3d 1295, 1304 (Fed. Cir. 2019); (c) a claim to a specific data encryption method for computer communication involving a several-step manipulation of data, *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (distinguishing *TQP Development, LLC v. Intuit Inc.*, 2014 WL 651935 (E.D. Tex. Feb. 19, 2014)) (the specific data encryption method “could not conceivably be performed in the human mind or with pencil and paper”). Whereas a claim limitation to a process that “can be performed in the human mind, or by a human using a pen and paper” qualifies as a mental process, a claim limitation that “could not, as a practical matter, be performed entirely in a human’s mind” (even if aided with pen and paper) would not qualify as a mental process.⁷

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an “‘inventive concept’” sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the

⁷ *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372, 1375–76 (Fed. Cir. 2011) (distinguishing *Research Corp. Techs. v. Microsoft Corp.*, 627 F.3d 859 (Fed. Cir. 2010), and *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319 (Fed. Cir. 2010)).

[abstract idea].” *Id.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

B. USPTO Revised Guidance

The PTO published revised guidance in the Federal Register concerning the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter “Revised Guidance”) (<https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf>). “All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” *Id.* at 51; *see also* October 2019 Update at 1 (*October 2019 Update: Subject Matter Eligibility*) (hereinafter “October 2019 Update”).

Under the Revised 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 activity such as a fundamental economic practice, or mental processes);⁸ and

(2) additional elements that integrate the judicial exception into a practical application (*see* Manual for Patent Examining Procedure (“MPEP”) §§ 2106.05(a)–(c), (e)–(h)).⁹

See Revised Guidance 52–53.

⁸ Referred to as “*Revised Step 2A, Prong 1*” in the Revised Guidance (hereinafter “*Step 2A(i)*”).

⁹ Referred to as “*Revised Step 2A, Prong 2*” in the Revised Guidance (hereinafter “*Step 2A(ii)*”).

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.¹⁰

See Revised Guidance 56.

Step 2A(i) – Abstract Idea

Informed by our judicial precedent, the Revised Guidance extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes the following groupings of subject matter, when recited as such in a claim limitation:

(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations;

(b) Certain methods of organizing human activity — fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions); and

(c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).

¹⁰ Items (3) and (4) continue to be collectively referred to as “*Step 2B*” of the Supreme Court’s two-step framework, described in *Mayo* and *Alice*.

Revised Guidance 52 (footnotes omitted).

Under the Revised Guidance, if the claim does not recite a judicial exception (a law of nature, natural phenomenon, or subject matter within the enumerated groupings of abstract ideas above), then the claim is patent-eligible at *Step 2A(i)*. This determination concludes the eligibility analysis, except in situations identified in the Revised Guidance.¹¹

However, if the claim recites a judicial exception (i.e., an abstract idea enumerated above, a law of nature, or a natural phenomenon), the claim requires further analysis for a practical application of the judicial exception in *Step 2A(ii)*.

Step 2A(ii) – Practical Application

If a claim recites a judicial exception in *Step 2A(i)*, we determine whether the recited judicial exception is integrated into a practical application of that exception in *Step 2A(ii)* by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements, along with the limitations that recite a judicial exception, individually and in combination to determine whether they integrate the exception into a practical application.

¹¹ In the rare circumstance in which an examiner believes a claim limitation that does not fall within the enumerated groupings of abstract ideas should nonetheless be treated as reciting an abstract idea, the procedure described in of the Guidance for analyzing the claim should be followed. *See* Revised Guidance, Section III.C.

The seven identified “practical application” sections of the MPEP,¹² cited in the Revised Guidance under *Step 2A(ii)*, are:

- (1) MPEP § 2106.05(a) Improvements to the Functioning of a Computer or To Any Other Technology or Technical Field
- (2) MPEP § 2106.05(b) Particular Machine
- (3) MPEP § 2106.05(c) Particular Transformation
- (4) MPEP § 2106.05(e) Other Meaningful Limitations
- (5) MPEP § 2106.05(f) Mere Instructions To Apply An Exception
- (6) MPEP § 2106.05(g) Insignificant Extra-Solution Activity
- (7) MPEP § 2106.05(h) Field of Use and Technological Environment

See Revised Guidance 55.

If the recited judicial exception is integrated into a practical application as determined under one or more of the MPEP sections cited above, then the claim is not directed to the judicial exception, and the patent-eligibility inquiry ends. *See Revised Guidance 54.* If not, then analysis proceeds to *Step 2B*.

Step 2B – “Inventive Concept” or “Significantly More”

Under our reviewing courts’ precedent, it is possible that a claim that does not “integrate” a recited judicial exception under *Step 2A(ii)* is nonetheless patent eligible. For example, the claim may recite additional

¹² *See* MPEP § 2106.05(a)–(c), (e)–(h). Citations to the MPEP herein refer to revision [R-08.2017]. Sections 2106.05(a), (b), (c), and (e) are indicative of integration into a practical application, while § 2106.05(f), (g), and (h) relate to limitations that are not indicative of integration into a practical application.

elements that render the claim patent eligible even though one or more claim elements may recite a judicial exception.¹³ The Federal Circuit has held claims eligible at the second step of the *Alice/Mayo* test (USPTO *Step 2B*) because the additional elements recited in the claims provided “significantly more” than the recited judicial exception (e.g., because the additional elements were unconventional in combination).¹⁴ Therefore, if a claim has been determined to be directed to a judicial exception under *Revised Step 2A*, we must also evaluate the additional elements individually and in combination under *Step 2B* to determine whether they provide an inventive concept (i.e., whether the additional elements amount to significantly more than the exception itself).¹⁵

Under the Revised Guidance, we must consider in *Step 2B* whether an additional element or combination of elements: (1) “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 (2) “simply appends well-understood, routine, conventional activities previously known to the industry, specified

¹³ See, e.g., *Diehr*, 450 U.S. at 187.

¹⁴ See, e.g., *Amdocs, Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300, 1304 (Fed. Cir. 2016); *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016); *DDR Holdings v. Hotels.com, L.P.*, 773 F.3d 1245, 1257–59 (Fed. Cir. 2014).

¹⁵ The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.” *See Revised Guidance, Section III.B.*¹⁶

In the *Step 2B* analysis, an additional element (or combination of elements) is not well-understood, routine or conventional unless the examiner finds an evidentiary basis, and expressly supports a rejection in writing with, one or more of the following:

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s). . . .
2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s). . . .
4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s). . . .

¹⁶ In accordance with existing *Step 2B* guidance, an Examiner’s finding that an additional element (or combination of elements) is well understood, routine, conventional activity must be supported with at least one of the four specific types of evidence required by the USPTO *Berkheimer* Memorandum, as shown above. For more information concerning evaluation of well-understood, routine, conventional activity, *see* MPEP § 2106.05(d), as modified by the USPTO *Berkheimer* Memorandum (USPTO Commissioner for Patents Memorandum dated Apr. 19, 2018, “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (hereinafter “*Berkheimer Memo*”).

See Berkheimer Memo 3–4.

If the Examiner or the Board determines under *Step 2B* that the element (or combination of elements) amounts to significantly more than the exception itself, the claim is eligible, thereby concluding the eligibility analysis.

However, if a determination is made that the element and combination of elements do not amount to significantly more than the exception itself, the claim is ineligible under *Step 2B*, and the claim should be rejected for lack of subject matter eligibility.

Analysis

Step 1 – Statutory Category

Claim 1, as a method (process) claim, recites one of the enumerated categories of eligible subject matter in 35 U.S.C. § 101. Therefore, the issue before us is whether it is directed to a judicial exception without significantly more.

Step 2A(i): Does the Claim Recite a Judicial Exception?

The Examiner determined that claim 1 is directed to, *inter alia*, “the abstract idea of providing a transportation route to a user which falls into the categor[y] of [] a method of organizing human activities.” Final Act. 2–3.

We conclude claim 1 does not recite the judicial exceptions of either natural phenomena or laws of nature. We evaluate, *de novo*, whether claim 1 recites an abstract idea based upon the Revised Guidance.

We look to the Specification to provide context as to what the claimed invention is directed to. In this case, the Specification discloses that the

invention “relates generally to multi-modal transportation systems, and more particularly, to a multi-modal transportation system that provides an optimized transportation route through a correlation of a user's holistic transportation route goals and transit mode availability.” Spec. 1, ll. 12–15.

Appellant’s Abstract describes the invention as follows:

A method and an apparatus for providing a transportation route to a user are provided. Travel information from the user, a plurality of transportation route goals ranked in a specified order by the user, and attribute information of a plurality of transit modes from a transit information system are received by the central system. An optimized transportation route is determined for the user through a correlation of the plurality of ranked transportation route goals and attribute information that corresponds to the received travel information. The transportation route comprises one or more of the plurality of transit modes. The optimized transportation route is transmitted to the user.

Spec. (Abstract).

In TABLE I below, we identify in *italics* the specific claim limitations in claim 1 that we conclude recite an abstract idea. We additionally identify in **bold** the additional (non-abstract) claim limitations that represent generic computer components and techniques, and underline limitations representing extra or post-solution activity:

TABLE I

Independent Claim 1	Revised Guidance
<p>A method for providing a transportation route to a user comprising the steps of:</p>	<p>A process (method) is a statutory subject matter class. <i>See</i> 35 U.S.C. § 101. <i>See</i> 35 U.S.C. § 101 (“Whoever 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.”).</p>
<p>[L1] <u>collecting</u>, by [L1a] a transit information system, <u>attribute information</u> of a plurality of public transit modes through links to transit vehicles acting as traffic probes, the attribute information of the plurality of public transit modes including a level of disabled user accessibility for each transit mode, which is calculated based on aggregated feedback from a plurality of users;</p>	<p>As claimed, a transit information system is a generic computer arrangement. <i>See</i> Spec. 4, ll. 8–9 (“The system includes a transit information system that provides attribute information of a plurality of transit modes to a routing system.”).</p> <p>Collecting attribute information, i.e., data gathering, is insignificant extra-solution activity. Revised Guidance 55, n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[L2] providing, by an internet-enabled device, access for a user to a hardware-implemented routing system through an interface;</p>	<p>As claimed, providing user access to a routing system through an internet-enabled device interface represents generic computer arrangements and functionality. <i>See</i> Spec. 6, ll. 14–17 (“A user, or specifically, a commuter 200 accesses a central system 208 through an interface 210. FIG. 3 is a screen shot of a GUI of the system, according to an embodiment of the present invention. A preferred embodiment provides an interface via an application, which can</p>

Independent Claim 1	Revised Guidance
	<p>be accessed from an internet-enabled source (e.g. a computer, PDA, etc.)”). <i>See Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.</i>, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (indicating components such as an “interface” are generic computer components that do not satisfy the inventive concept requirement).</p>
<p>[L3] <u>receiving</u>, at the hardware-implemented routing system, <u>travel information from the user</u> through the interface of the internet-enabled device, a plurality of transportation route goals ranked in a specified order by the user through the interface of the internet-enabled device, <u>attribute information of one or more personal transit modes</u> owned by the user from the user through the interface of the internet-enabled device, the attribute information of the plurality of public transit modes from the transit information system, and <u>attribute information of parking capacity and current parking availability</u> for a personal transit mode at transit nodes;</p>	<p>“[R]eceiving . . . travel information . . . attribute information of one or more personal transit modes . . . [and] attribute information of parking capacity and current parking availability”, i.e., data gathering, is insignificant extra-solution activity. Revised Guidance 55, n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[L4] storing, in the hardware-implemented routing system, the attribute information of the plurality of transit modes as</p>	<p>“[S]toring . . . information” represents conventional computer functionality.</p>

Independent Claim 1	Revised Guidance
<p>real-time records of the attribute information;</p>	
<p>[L5] <i>determining</i>, by the hardware-implemented routing system, <i>an optimized transportation route for the user through a correlation of the plurality of ranked transportation route goals and the received attribute information of the one or more personal transit modes</i>, the plurality of public transit modes, and parking capacity and current parking availability at viable transit nodes along potential routes, which correspond to the received travel information, wherein the transportation route comprises one or more transit modes from the one or more personal transit modes and the plurality of public transit modes; and</p>	<p>“[D]etermining . . . an optimized transportation route . . . [using] correlation of . . . goals and the received . . . information” is an abstract idea, i.e., an observation, evaluation, judgment, opinion” which could be performed as a mental process. <i>See Revised Guidance 52.</i></p>
<p>[L6] <u>transmitting the optimized transportation route</u> from the hardware-implemented routing system to the internet-enabled device of the user through the interface.</p>	<p>Transmitting information, e.g., for display, is insignificant extra-solution activity. Revised Guidance 55, n.31; <i>see also</i> MPEP § 2106.05(g); <i>and see buySAFE, Inc. v. Google, Inc.</i>, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (computer receives and sends information over a network); <i>and see In re Bilski</i>, 545 F.3d 943, 962 (Fed. Cir. 2008) (<i>en banc</i>), <i>aff’d on other grounds</i>, 561 U.S. 593 (2010) (“[T]he involvement of the</p>

Independent Claim 1	Revised Guidance
	machine or transformation in the claimed process must not merely be insignificant extra-solution activity”);

Appeal Br. 10 (Claims App.).

Under the broadest reasonable interpretation standard,¹⁷ we conclude, other than the computer-related aspects, limitations L1 through L6 recite steps that can be practically performed in the human mind when providing a transportation route to a user. *See* Final Act. 2–3. For example, limitation L5 (“determining . . . an optimized transportation route for the user [by considering a variety of the user goals and transportation factors recited]”) is an operation that generally occurs when evaluating transportation route options, whether initiated person-to-person, on paper, or using a computer.

We determine that claim 1, overall, recites a mental process that may also be performed by pen and paper. This type of activity, i.e., providing an optimized transportation route while considering a user's transportation route goals and transit mode availability, as recited in limitations L1 through L6, for example, and aside from any computer-related aspects, includes longstanding conduct that existed well before the advent of computers and

¹⁷ During prosecution, claims must be given their broadest reasonable interpretation when reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

the Internet, which could be carried out by a human with pen and paper. *See 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.*”).¹⁸

Thus, under *Step 2A(i)*, we agree with the Examiner that claim 1’s method for providing a transportation route to a user recites a judicial exception. In particular, we conclude claim 1, under our Revised Guidance, recites a judicial exception of determining a transportation route, i.e., a mental process, and thus is an abstract idea.

Step 2A(ii): Judicial Exception Integrated into a Practical Application?

Because we conclude the claims are directed to a judicial exception, we proceed to the “practical application” *Step 2A(ii)* in which we determine whether the recited judicial exception is integrated into a practical application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and

¹⁸ Our reviewing court recognizes that “[a]n abstract idea can generally be described at different levels of abstraction.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). That need not and, in this case does not, “impact the patentability analysis.” *Id.* at 1241. Further, “[t]he Board’s slight revision of its abstract idea analysis does not impact the patentability analysis.” *Id.* Moreover, merely combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas).

(b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

With respect to this phase of the analysis,

Appellants assert that the claims of the present invention are relate to computer functionality improvements in how computers carry out functions of determining an optimized transportation route and transmitting the optimized transportation route to a device. Such determining and transmitting steps could not be categorized as processes focused on abstract ideas that simply aid existing computers.

Appeal Br. 4.

In support of this contention, Appellant relies upon the Federal Circuit’s holding in *Enfish*¹⁹ in which Appellant states the “claims are not abstract if directed toward computer-functionality improvements in how computers could carry out one of their basic functions of storage and retrieval of data.” *Id.*

We disagree with Appellant’s contentions. We disagree because, in *Enfish*, our reviewing court held claims directed to a self-referential logical model for a computer database patent-eligible under step one of *Alice*. *Enfish*, 822 F.3d at 1330. The disclosed technique enabled faster searching and more effective storage of data than previous methods. *Id.* at 1333. The court found the claims directed to “a specific improvement to the way computers operate, embodied in the self-referential table” (*id.* at 1336), and explained that the claims are “not simply directed to *any* form of storing tabular data, but instead are specifically directed to a *self-referential table*

¹⁹ *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016).

for a computer database” that functions differently than conventional databases. *Id.* at 1337.

We do not find the claims on appeal, which recite a method for providing a transportation route to a user based upon user preferences and available transit modes, to be sufficiently analogous to those in *Enfish*, in which the Federal Circuit held the claims to be an improvement in the operation of the computer.

As to the specific limitations under our analysis, as identified in TABLE I, above, we find limitation [L5] (“determining . . . an optimized transportation route”) recites an abstract idea, and limitations [L1] (“collecting . . . attribute information”) and [L3] (“receiving [various types of] information”) recite insignificant data gathering. *See* MPEP § 2106.05(g). Data gathering, as performed by the steps or functions in Appellant’s claims, is a classic example of insignificant extra-solution activity. *See, e.g., In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff’d sub nom, Bilski v. Kappos*, 561 U.S. 593 (2010).

We also find limitation [L6] (“transmitting the optimized transportation route”) recites insignificant post solution activity. The Supreme Court guides that the “prohibition against patenting abstract ideas ‘cannot be circumvented by’ . . . adding ‘insignificant postsolution activity.’” *Bilski*, 561 U.S. at 610–11 (quoting *Diehr*, 450 U.S. at 191–92).

Moreover, on this record, we are of the view that Appellant’s claims do not operate the recited generic computer components, i.e., limitations [L1a] (“a transit information system”), [L2] (“providing, by an internet-enabled device, access for a user to a hardware-implemented routing system

through an interface”) and [L4] (“storing . . . the attribute information”), in an unconventional manner to achieve an improvement in computer functionality. *See* MPEP § 2106.05(a). *See also* Step 2B analysis, *infra*.

We find the limitations of claim 1 either recite abstract ideas, extra or post-solution activity, or generic computer functionality, as identified in *Step 2A(i)*, *supra*, and none of the limitations integrate the judicial exception of providing a transportation route to a user into a practical application as determined under one or more of the MPEP sections cited above. The claim as a whole merely uses instructions to implement the abstract idea on a computer or, alternatively, merely uses a computer as a tool to perform the abstract idea.

Under analogous circumstances, the Federal Circuit has held that “[t]his is a quintessential ‘do it on a computer’ patent: it acknowledges that [such] data . . . was previously collected, analyzed, manipulated, and displayed manually, and it simply proposes doing so with a computer. We have held such claims are directed to abstract ideas.” *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016) (“Though lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology.”).

Therefore, the claim as a whole merely uses instructions to implement the abstract idea on a computer or, alternatively, merely uses a computer as a

tool to perform the abstract idea. Thus, on this record, Appellant has not shown an improvement or practical application under the guidance of MPEP section 2106.05(a) (“Improvements to the Functioning of a Computer or to Any Other Technology or Technical Field”) or section 2106.05(e) (“Other Meaningful Limitations”). Nor does Appellant advance any arguments in the Brief(s) that are directed to the *Bilski* machine-or-transformation test, which would only be applicable to the method (process) claims on appeal. See MPEP §§ 2106.05(b) (Particular Machine) and 2106.05(c) (Particular Transformation).

Therefore, we conclude the abstract idea is not integrated into a practical application, and thus the claim is directed to the judicial exception.

Step 2B – “Inventive Concept” or “Significantly More”

If the claims are directed to a judicial exception, and not integrated into a practical application, as we conclude above, we proceed to the “inventive concept” step. For *Step 2B* we must “look with more specificity at what the claim elements add, in order to determine ‘whether they identify an “inventive concept” in the application of the ineligible subject matter’ to which the claim is directed.” *Affinity Labs*, 838 F.3d at 1258.

In applying step two of the *Alice* analysis, our reviewing court guides we must “determine whether the claims do significantly more than simply describe [the] abstract method” and thus transform the abstract idea into patentable subject matter. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). We look to see whether there are any “additional features” in the claims that constitute an “inventive concept,” thereby rendering the claims eligible for patenting even if they are directed to an

abstract idea. *Alice*, 573 U.S. at 221. Those “additional features” must be more than “well-understood, routine, conventional activity.” *Mayo*, 566 U.S. at 79.

Limitations referenced in *Alice* that are not enough to qualify as “significantly more” when recited in a claim with an abstract idea include, as non-limiting or non-exclusive examples: adding the words “apply it” (or an equivalent) with an abstract idea²⁰; mere instructions to implement an abstract idea on a computer²¹; or requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.²²

Moreover, on this record, we are of the view that Appellant’s claims do not operate the recited generic computer components, i.e., limitations [L1a] (“a transit information system”), [L2] (“providing, by an internet-enabled device, access for a user to a hardware-implemented routing system through an interface”) and [L4] (“storing . . . the attribute information”), in an unconventional manner to achieve an improvement in computer functionality. *See* MPEP § 2106.05(a). *See also* Step 2B analysis, *infra*.

Appellant’s arguments notwithstanding, evaluating representative claim 1 under step 2 of the *Alice* analysis, we conclude it lacks an inventive

²⁰ *Alice*, 573 U.S. at 221–23.

²¹ *Alice*, 573 U.S. at 222–23, e.g., simply implementing a mathematical principle on a physical machine, namely a computer.

²² *Alice*, 573 U.S. at 225 (explaining using a computer to obtain data, adjust account balances, and issue automated instructions involves computer functions that are well-understood, routine, conventional activities).

concept that transforms the abstract idea of providing a transportation route to a user into a patent-eligible application of that abstract idea.

The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader*, 811 F.3d at 1325. In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer*, 881 F.3d at 1368.

As evidence of the conventional nature of the recited “transit information system” in limitation [L1a], “providing, by an internet-enabled device, access for a user to a hardware-implemented routing system through an interface” in limitation [L2], and “storing . . . information” in limitation [L4] in method claim 1; and similarly in system claim 20, the Specification discloses, *inter alia*, “[t]he system includes a transit information system that provides attribute information of a plurality of transit modes to a routing system.” Spec. 4, ll. 8–9. Further, “[a] user, or specifically, a commuter 200 accesses a central system 208 through an interface 210. FIG. 3 is a screen shot of a GUI of the system, according to an embodiment of the present invention. A preferred embodiment provides an interface via an application, which can be accessed from an internet-enabled source (e.g. a computer, PDA, etc.)” Spec. 6, ll. 14–17. In addition, “[t]he central system 208 keeps real-time records of the transit mode attributes 250 through links to sensors, information feeds, or other systems that provide the necessary data.

Thus, because the Specification describes the additional elements in general terms, without describing the particulars, we conclude these claim limitations may be broadly but reasonably construed as reciting conventional

computer components and techniques, particularly in light of Appellants' Specification, as quoted above.²³

The MPEP, based upon our precedential guidance, provides additional considerations with respect to analysis of the well-understood, routine, and conventional nature of the recited computer-related components.

Another consideration when determining whether a claim recites significantly more than a judicial exception is whether the additional elements amount to more than a recitation of the words “apply it” (or an equivalent) or are more than mere instructions to implement an abstract idea or other exception on a computer. As explained by the Supreme Court, in order to transform a judicial exception into a patent-eligible application, the additional element or combination of elements must do “more than simply stat[e] the [judicial exception] while adding the words ‘apply it’”. *Alice Corp. v. CLS Bank*, 573 U.S. ___, 134 S. Ct. 2347, 2357, 110 USPQ2d 1976, 1982-83 (2014) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72, 101 USPQ2d 1961, 1965). Thus, for example, claims that amount to nothing more than an instruction to apply the abstract idea using a generic computer do not render an abstract idea eligible. *Alice Corp.*, 134 S. Ct. at 2358, 110 USPQ2d at 1983. *See also* 134 S. Ct. at 2389, 110 USPQ2d at 1984 (warning against a § 101 analysis that turns on “the draftsman’s art”)

In *Alice Corp.*, the claim recited the concept of intermediated settlement as performed by a generic computer. The Court found that the recitation of the computer in the claim amounted to mere instructions to apply the abstract idea on a generic computer. 134 S. Ct. at 2359-60, 110 USPQ2d at 1984. The Supreme Court also discussed this concept in an earlier

²³ Claim terms are to be given their broadest reasonable interpretation, as understood by those of ordinary skill in the art and taking into account whatever enlightenment may be had from the Specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

case, *Gottschalk v. Benson*, 409 U.S. 63, 70, 175 USPQ 673, 676 (1972), where the claim recited a process for converting binary-coded decimal (BCD) numerals into pure binary numbers. The Court found that the claimed process had no substantial practical application except in connection with a computer. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676. The claim simply stated a judicial exception (e.g., law of nature or abstract idea) while effectively adding words that “apply it” in a computer. *Id.*

MPEP § 2106.05(f) (“Mere Instructions To Apply An Exception”).

With respect to the *Step 2B* analysis, we conclude, similar to *Alice*, the recitation of a method for providing a transportation route to a user that includes a “transit information system,” “user interface,” and “storing . . . information” (claim 1) as argued by Appellants, and similarly for system claim 20, is simply not enough to transform the patent-ineligible abstract idea of providing a transportation route to a user into a patent-eligible invention under *Step 2B*. See *Alice*, 573 U.S. at 221 (“[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.”).

We conclude the claims fail the *Step 2B* analysis because claim 1, in essence, merely recites various computer-based elements, performing well-understood, routine, conventional functions, along with no more than mere instructions to implement the identified abstract idea using the computer-based elements.

Therefore, in light of the foregoing, we conclude, under the Revised Guidance, that each of Appellant’s claims 1–3, 5–7, 9–14, 16, 18, and 20, considered as a whole, is directed to a patent-ineligible abstract idea that is not integrated into a practical application and does not include an inventive

concept. Accordingly, we sustain the Examiner's § 101 rejection of independent claim 1, and grouped claims 2, 3, 5–7, 9–14, 16, 18, and 20 which fall therewith. *See Claim Grouping, supra.*

2. § 103(a) Rejection R2 of Claims 1, 2, 7, and 20

Issue 2

Appellant argues (Appeal Br. 5–7; Reply Br. 3–5) the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as being obvious over the combination of Lee, Mundinger, Burgener, and Golledge is in error. These contentions present us with the following issue:

Did the Examiner err in finding the cited prior art combination teaches or suggests “[a] method for providing a transportation route to a user” that includes, *inter alia*, the steps of “collecting . . . attribute information of a plurality of public transit modes . . . the attribute information . . . including a level of disabled user accessibility for each transit mode, which is calculated based on aggregated feedback from a plurality of users,” as recited in claim 1?

Principles of Law

One cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references.” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art.” *Id.* at 425.

In *KSR*, the Court stated “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007).

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id. at 417.

Further, the relevant inquiry is whether the Examiner has set forth “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in *KSR*, 550 U.S. at 418).

Finally, whether a reference in the prior art is “analogous” is a fact question. *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992) (citing *Panduit Corp. v. Dennison Mfg.*, 810 F.2d 1561, 1568 n.9 (Fed. Cir.), *cert. denied*, 481 U.S. 1052 (1987)). Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *Id.*

(citing *In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986); *In re Wood*, 599 F.2d 1032, 1036 (CCPA 1979)).

A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem. Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.

In re Clay, 966 F.2d at 659.

Analysis

The Examiner relies upon the *combination* of Lee, Mundinger, Burgener, and Golledge to render claim 1 unpatentable under 35 U.S.C. § 103(a). Final Act. 4–7.

Appellant contends:

Golledge describes the results of a survey of blind and vision impaired users of public transit facilities. Specifically, the cited portions of *Golledge* include a section relating to the characteristics and activity patterns of the sample, and a section describing the opinions, perceptions, and attitudes of participants with respect to the usefulness of certain types of information in planning trips.

Golledge relates simply to the results of a survey and fails to relate in any way to a transit information system, an internet-enabled device, or a hardware-implemented routing system. Golledge also fails to relate in any way to the determination of an optimized transportation route. Accordingly, Golledge is nonanalogous prior art. Specifically,

Golledge is not in the same field of endeavor as the claimed invention, and is also not reasonably pertinent to the problem to be solved.

Further, while the information collected in *Golledge* may be similar to aggregated feedback, *Golledge* fails to disclose that collected information is used to calculate a level of disabled user accessibility for each transit mode, as recited in Claim 1. Accordingly, *Golledge* fails to remedy the deficiencies of *Lee*, *Mundinger*, and *Burgener* noted by the Examiner, and Claim 1 is patentable over the combination of *Lee*, *Mundinger*, *Burgener*, and *Golledge*.

Appeal Br. 6.

We are not persuaded by Appellant’s arguments. The Examiner relied upon *Burgener* as teaching or suggesting the broader disputed limitation of “collecting, by a transit information system, attribute information of a plurality of public transit modes through links to transit vehicles acting as traffic probes,” and offered *Golledge* for the narrower purpose of teaching or suggesting aggregating, from multiple users, a metric regarding levels of disabled user accessibility for a transit mode, *i.e.*, “the attribute information of the plurality of public transit modes including a level of disabled user accessibility for each transit mode, which is calculated based on aggregated feedback from a plurality of users[,]” as recited in claim 1. Ans. 5–6.

With respect to Appellant’s non-analogous art argument (Appeal Br. 6), the Examiner responds by finding “[i]n this case, *Golledge* is concerned with *Public Transit Use by Non-Driving Disabled Persons: the Case of the Blind and Vision Impaired* . . . [and] maintains that this is in the same field of Appellant’s endeavor.”

In response to the Examiner’s restatement of the relevant finding concerning the teachings of *Golledge* in the Answer, Appellant argues “the

Examiner appears to confuse mere ‘transit use’ by an individual with a ‘transit information system’ that collects information on transit modes” (Reply Br. 4), and

Golledge relates to the results of a survey, which is not in the same field as the optimization of a transportation route. The results of such a survey are also not reasonably pertinent to optimizing the transportation route using at least a level of disabled user accessibility. *Golledge* fails to relate in any way to a transit information system, an internet-enabled device, or a hardware-implemented routing system. Accordingly, Appellants maintain that *Golledge* is nonanalogous prior art.

Id.

We agree with the Examiner’s finding that the combination of Lee, Mundinger, Burgener, and *Golledge* teach or suggest all the limitations of claim 1, and particularly agree that the combination of Burgener and *Golledge* teach or suggest the disputed limitation identified above. We disagree with Appellant’s arguments concerning the Examiner’s reliance upon the teachings of *Golledge* because they are not responsive to the rejection as articulated by the Examiner that relies upon the *combination* of Burgener and *Golledge*.

Moreover, even assuming, *arguendo*, that *Golledge* is not in the same field of endeavor as Appellant’s transportation route optimization as argued by Appellant, a proposition with which we do not agree, Appellant does not address the second prong of the test for analogous art, *i.e.*, whether the reference is reasonably pertinent to the particular problem with which the inventor is involved. *See Clay*, 966 F.2d at 658.

In further support of the Examiner’s findings and legal conclusions of obviousness, we find the *Golledge* reference, on its face, is reasonably

pertinent to Appellant's problem of optimizing transportation routes by aggregating, from multiple users, a metric regarding levels of disabled user accessibility for a transit mode. *See, e.g.*, Golledge at (ii).

Based upon the findings above, on this record, we are not persuaded of error in the Examiner's reliance on the cited prior art combination to teach or suggest the disputed limitations of claim 1, nor do we find error in the Examiner's resulting legal conclusion of obviousness. Therefore, we sustain the Examiner's obviousness rejection of independent claim 1, and grouped claims 2, 7, and 20 which fall therewith. *See* Claim Grouping, *supra*.

3. § 103(a) Rejections R3 and R4 of Claims 3, 5, 6, 9–14, and 16

In view of the lack of any substantive or separate arguments directed to obviousness Rejections R3 and R4 of claims 3, 5, 6, 9–14, and 16 under § 103(a) (*see* Appeal Br. 7–8), we sustain the Examiner's rejection of these claims. Arguments not made are waived.²⁴

REPLY BRIEF

To the extent Appellant *may* advance new arguments in the Reply Brief (Reply Br. 1–4) not in response to a shift in the Examiner's position in the Answer, arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's

²⁴ Appellant merely argues, "because the above arguments place the independent claim [1] in condition for allowance, these dependent claims [3, 5, 6, 9–14, and 16] are also believed to be in condition for allowance" (Appeal Br. 7), and "Claim 16 is patentable for at least the reasons presented above with regard to Claim 1." Appeal Br. 8.

Answer will not be considered except for good cause (*see* 37 C.F.R. § 41.41(b)(2)), which Appellant has not shown.

CONCLUSIONS

(1) Under our Revised Guidance, governed by relevant case law, claims 1–3, 5–7, 9–14, 16, 18, and 20 are patent-ineligible under 35 U.S.C. § 101, and we sustain the rejection.

(2) The Examiner did not err with respect to obviousness Rejections R2 through R4 of claims 1–3, 5–7, 9–14, 16, 18, and 20 under 35 U.S.C. § 103(a) over the cited prior art combinations of record, and we sustain the rejections.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Basis / References	Affirmed	Reversed
1–3, 5–7, 9–14, 16, 18, 20	101	Subject Matter Eligibility	1–3, 5–7, 9–14, 16, 18, 20	
1, 2, 7, 20	103(a)	Lee, Mundinger, Burgener, Golledge	1, 2, 7, 20	
3, 5, 6, 9–14	103(a)	Lee, Mundinger, Burgener, Golledge, Hileman	3, 5, 6, 9–14	
16	103(a)	Lee, Mundinger, Burgener, Golledge, Speier	16	
Overall Outcome			1–3, 5–7, 9–14, 16, 18, 20	

Appeal 2019-001367
Application 12/746,445

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)(1)(iv). See 37 C.F.R. § 41.50(f).

AFFIRMED