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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* KENT QING PU, IVAN ANGELOV, and DAVID THIEME

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Appeal 2017-003775  
Application 12/186,524  
Technology Center 3600

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Before ST. JOHN COURTENAY III, BETH Z. SHAW, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner’s Non-Final Rejection of claims 1–20, which are all the claims pending in this application. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

*Introduction*

Exemplary embodiments of Appellants’ invention relate generally to “the area of Global Positioning System (GPS).” Spec. ¶ 2. In particular, the invention on appeal “is related to navigation on non-linearly scaled maps

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<sup>1</sup> The real party in interest is Information Corporation. App. Br. 1.

and how to display such non-linearly scaled maps with proper colors on a display screen.” *Id.*

*Exemplary Claim*

1. A method for navigating in a particular area, the method comprising:

downloading from a network into a computing device an artistic map, the artistic map being non-linearly scaled and including various objects being exaggeratedly shown on the computing device to facilitate a user using the computing device to view and select one of the objects to navigate thereto in the artistic map, wherein the computing device is portable, equipped with navigation capability and provides a traveling guidance on a geographical map, *the artistic map is not used directly by the computing device for navigation*, each of the objects is represented by a plurality of points on a display of the computing device, and the geographical map is not being displayed on the display;

receiving in the computing device a selection on the one of the objects from the user as a selected object;

determining by the computing device a pair of coordinates for one of the points on the selected object;

transforming in the computing device the pair of coordinates to a physical point represented by a pair of latitude and longitude in the geographical map not being shown on the display,

the points representing the selected object having different pairs of coordinates, but all of the different pairs of coordinates for the selected object corresponding substantially to the physical point when said transforming is performed;

detecting a current location of the computing device in the geographical map;

determining according to the geographical map a navigational direction from the current location to the one of the objects being selected; and

showing the navigational direction on the artistic map being displayed.

Emphasis added regarding the contested negative limitation.

*Rejections<sup>2</sup>*

- A. Claims 1–20 are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Non-Final Act. 3.
- B. Claims 1–4 and 11–14 are rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over the combined teachings and suggestions of Salmre (US 2007/0176932 A1, published Aug. 2, 2007), in view of Agrawala et al. (US 2005/0149303 A1, published July 7, 2005), hereinafter referred to as Salmre and Agrawala, respectively. Non-Final Act. 4.
- C. Claims 5–9 and 15–19 are rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over the combined teachings and suggestions of Salmre and Agrawala, and further in view of Suomela (US 6,697,734 B1, issued Feb. 24, 2004). Non-Final Act. 7.
- D. Claims 10 and 20 are rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over the combined teachings and suggestions of Salmre and Agrawala, and further in view of Rasmussen (US 2006/0206264 A1, published Sept. 14, 2006). Non-Final Act. 10.

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<sup>2</sup> Regarding the rejections of claims 11–20, the Examiner indicates: “As per Claims 11-20, Claims 11-20 are directed to a portable device. Claims 11-20 recite the same or similar limitations as those addressed above for Claims 1-10. Claims 11-20 are therefore rejected for the same reasons set forth above for Claims 1-10.” Non-Final Act. 10. *We have corrected the headings of rejections B, C, and D, accordingly, as shown above.*

*Issues on Appeal*

Did the Examiner err in rejecting claims 1–20 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter?

Did the Examiner err in rejecting claims 1–20 under pre-AIA 35 U.S.C. § 103(a) as being obvious over the cited combinations of references?

ANALYSIS

We have considered all of Appellants’ arguments and any evidence presented. To the extent Appellants have not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). We highlight and address specific findings and arguments for emphasis in our analysis below.

*Mayo/Alice Analysis under 35 U.S.C. § 101*

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). 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, 82–84 (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*, 134 S. Ct. at 2355.

The first step in that analysis is to determine whether the claims at issue are directed to one of those patent-ineligible concepts, such as an *abstract idea*. Abstract ideas may 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 2355–57.

If the claims are *not directed* to a patent-ineligible concept, *the inquiry ends*. See *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017).

Otherwise, the inquiry proceeds to the second step in which the elements of the claims are considered “individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). We consider the question of whether the claims are directed to a *specific improvement* in the capabilities of the computing devices, or, instead, “a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

We, therefore, decide under step two whether the claims: (a) set forth an *inventive concept* that provides a specific means or method that *improves* the relevant technology, or (b) are directed to a result or effect that itself is the abstract idea, in which the claims merely invoke generic processes and machinery. See *Enfish*, 822 F.3d at 1336.

*The Examiner's Rejection A under 35 U.S.C. § 101*

Regarding the first step of the *Alice/Mayo* analysis, the Examiner concludes claims 1–20 are directed to:

*the abstract idea of comparing new and stored information and using rules to identify options.* While the claims may not explicitly recite, “comparing new and stored information and using rules to identify options”, the concept of “comparing new and stored information and using rules to identify options” is described, for example, by the downloading, receiving, determining, transforming, detecting, determining and showing steps as recited in currently amended independent Claim 1.

Non-Final Act. 3 (emphasis added).<sup>3</sup>

Regarding the second step of the *Mayo/Alice* analysis, the Examiner finds the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception,

because the additional elements or combination of elements in the claims in conjunction with the abstract idea per se amounts to no more than mere instructions to implement the idea on a computer, and/or the 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.

Non-Final Act. 3, emphasis added.<sup>4</sup>

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<sup>3</sup> “Patent eligibility under § 101 presents an issue of law.” *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340 (Fed. Cir. 2013).

<sup>4</sup> 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).

For these reasons, the Examiner concludes that all claims 1–20 on appeal are not patent-eligible under 35 U.S.C. § 101.

*Mayo/Alice Analysis — Step 1*

Regarding *Alice* Step 1, Appellants contend, *inter alia*:

[T]he Examiner has *mischaracterized* the claims. *Neither the Specification nor the claims indicate any operation involving a set of data being compared with a stored data.* The Examiner then continues with the self-contradictory statement “While the claims may not explicitly recite, “comparing new and stored information and using rules to identify options”, the concept of “comparing new and stored information and using rules to identify options” is described, for example, by the downloading, receiving, determining, transforming, detecting, determining and showing steps as recited in currently amended independent Claim 1. As will be further described below, *Claim 1 neither recites nor indicates anything related to comparing new and stored information and using rules to identify options as is being alleged by the Office Action but rather to the (many-to-one) transformation of coordinates in an artistic map to a pair of latitude and longitude in the geographical map.*

App. Br. 7, emphasis added and omitted.

At the outset, we agree with the Appellants’ that the Examiner has mischaracterized the claim language. App. Br. 7. We particularly note the Examiner expressly acknowledges the “claims may not explicitly recite, ‘comparing new and stored information and using rules to identify options,’” which is the sole basis proffered by the Examiner to support the legal conclusion that Appellants’ claims are directed to an abstract idea. *See Non-Final Act. 3.* Nor does the Examiner conclude that Appellants’ claims are directed to a fundamental economic practice, a method of doing business, or

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a method of organizing human activity. The Examiner’s citation in the Answer (11) to the non-precedential *SmartGene* Federal Circuit opinion (as a persuasive but not mandatory authority) does little to support the Examiner’s position.<sup>5</sup> Nor has the Examiner identified any specific rules recited in claim 1. Therefore, we agree with Appellants that the Examiner has not established that the claims are directed to an abstract idea under *Alice*, step 1. If the claims are *not directed* to a patent-ineligible concept, *the inquiry ends*. See *Visual Memory LLC*, 867 F.3d at 1262.

Accordingly, for at least these reasons, we are constrained on this record to reverse the Examiner’s rejection under 35 U.S.C. § 101 of claims 1–20, as being purportedly directed to patent-ineligible subject matter in light of *Alice* and its progeny.

*Rejection B of Claims 1–4 and 11–14 under § 103(a)*

As an initial matter of claim construction, we focus on the contested *negative limitation* that was added by amendment during prosecution: “*the artistic map is not used directly by the computing device for navigation.*” Claim 1, emphasis added.

We have reviewed Appellants’ cited support for the aforementioned negative limitation, as found in the Specification (App. Br. 3 referring to

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<sup>5</sup> The Examiner is referring to *SmartGene, Inc. v. Advanced Biological Laboratories, SA*, 555 F. App’x 950, 955 (Fed. Cir. 2014) (“Whatever the boundaries of the ‘abstract ideas’ category, the claim at issue here involves a mental process excluded from section 101: the mental steps of comparing new and stored information and using rules to identify medical options.”) (nonprecedential).

¶¶ 29, 30, 41–43). Our reviewing court guides that “[n]egative claim limitations are adequately supported when the specification describes a reason to exclude the relevant limitation. Such written description support need not rise to the level of disclaimer. In fact, it is possible for the patentee to support both the inclusion and exclusion of the same material.” *Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012). *See also* MPEP § 2173.05(i) (“Any negative limitation or exclusionary proviso must have basis in the original disclosure. . . . The mere absence of a positive recitation is not basis for an exclusion.”).

Turning to the proffered support found in Appellants’ Specification, at paragraph 43, we find sufficient support that would lead an artisan to use a geographic map and *exclude using a “deformed” artistic map* for navigation purposes:

A user of a GPS device showing a local artistic map needs to visualize the current position in the artistic map. While the current position is presented by the GPS device per a pair of geographic coordinates (longitude/latitude). According to one embodiment, a transformation from the geographic coordinates to image pixel coordinates is carried out to ensure that the current position or a destination is correctly presented in the artistic map. *Since the artistic map can be very deformed and different from the corresponding real geographic map*, different approaches may be applied for implementing such a transformation.

Spec. ¶ 43.

Thus, we find the originally-filed Specification sufficiently identifies a description of “a reason to exclude the relevant limitation” to satisfy the requirements under pre-AIA 35 U.S.C. § 112, first paragraph. *See Santarus*, 694 F.3d at 1351.

Further regarding the contested negative limitation (“*the artistic map is not used directly by the computing device for navigation*”), Appellants contend:

Salmre is *silent* about whether the non-linear map can be or cannot be used directly on the computing device for navigation. Claim 1 of the instant application recites the “artistic” map is not used directly by the computing device for navigation, instead, the geographical map is referenced for the navigational direction that is then shown onto the artistic map by “showing the navigational direction on the artistic map being displayed.” Given the one-to-one transformation, *Salmre does not care whether the non-linear map can be or cannot be used directly on the computing device for navigation.*

App. Br. 13 (emphasis added and omitted).

We note the Examiner relies on Salmre as teaching or suggesting the contested negative limitation. Non-Final Act. 4. However, we find the Examiner provides no specific mapping which reads the contested negative limitation on a *particular* feature found in Salmre (or in Agrawala).<sup>6</sup> We reproduce the pertinent portion of the Examiner’s rejection below:

As per Claim 1, Salmre discloses a method for navigating in a particular area, the method comprising:

- downloading from a network into a computing device an artistic map, the artistic map being non-linearly scaled and including various objects being exaggeratedly shown on the computing device to facilitate a user using the computing device to view and select one of the

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<sup>6</sup> See 37 C.F.R. § 1.104(c)(2) (“When a reference is complex or shows or describes inventions other than that claimed by the applicant, *the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.*” Emphasis added.

objects to navigate thereto in the artistic map, wherein the computing device is portable, equipped with navigation capability and provides a traveling guidance on a geographical map, **the artistic map is not used directly by the computing device for navigation**, each of the objects represented by a plurality of points on a display of the computing device, and the geographical map is not being displayed on the display [*see at least, Abstract; Figure 2; p. 1, ¶0001 (mobile device from application incorporated into current application); p. 1, ¶0007; p. 1, ¶0008; p. 1, ¶0011; p. 2, ¶0034; p. 2, ¶0035; p. 6, ¶0067; p. 6, ¶0071 (mobile devices); p. 6, ¶[0072-¶007 4, of Salmre]*];

Non-Final Act. 4 (bold added for emphasis, italic in original).

In reviewing the record, we particularly note the Examiner does not further respond in the Answer to Appellants' arguments regarding the contested negative limitation. Because the Examiner has not fully developed the record to establish how Salmre (or Agrawala) teaches or suggests the disputed negative limitation, we find speculation would be required to affirm the Examiner on this record. We decline to engage in speculation. "A rejection . . . must rest on a factual basis . . ." *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967). "The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not . . . resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis." *Id.*

Therefore, we are constrained by the record before us to find the Examiner erred in concluding the combination of Salmre and Agrawala renders obvious Appellants' independent claim 1.

Accordingly, we reverse the Examiner's § 103(a) rejection B of independent claim 1, and for the same reasons we also reverse rejection B of

remaining independent claim 11, which recites the aforementioned contested negative limitation using similar language of commensurate scope. Because we have reversed rejection B of all independent claims, for the same reasons we reverse the Examiner's § 103(a) rejection of all dependent claims also rejected under rejection B.

*Remaining § 103 Rejections C and D all Remaining Dependent Claims*

In light of our reversal of rejection B of independent claims 1 and 11, *supra*, we also reverse rejections C and D of all remaining dependent claims which variously and ultimately depend therefrom. On this record, we find the Examiner has not shown how the additionally cited secondary references overcome the aforementioned deficiency of the base combination of Salmre and Agrawala, as discussed above regarding claim 1, and the contested negative limitation.

*Conclusions*

The Examiner erred in rejecting claims 1–20, under 35 U.S.C. § 101, as being directed to patent-ineligible subject matter.

The Examiner erred in rejecting claims 1–20 as being obvious over the cited combinations of references under pre-AIA 35 U.S.C. § 103(a).

DECISION

We reverse the Examiner's decision rejecting claims 1–20.

REVERSED