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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BENOIT VANHOLME
and MICHAEL MANZ

Appeal 2020-000033
Application 15/005,258
Technology Center 3600

Before HUBERT C. LORIN, NINA L. MEDLOCK, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ seeks our review under 35 U.S.C. § 134(a) of the Final Rejection of claims 1–19. We have jurisdiction under 35 U.S.C. § 6(b) (2012).

We REVERSE and enter a NEW GROUND of rejection.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies Bayerische Motoren Werke Aktiengesellschaft as the real party in interest. Appeal Br. 1.

THE INVENTION

The claimed subject matter “relates to a method for efficiently providing occupancy information for the surroundings of a vehicle and to a computation apparatus that is set up accordingly” (Spec. para. 2). Claim 1 is illustrative, and is reproduced below:

1. *A method for providing occupancy information for surroundings of a vehicle, wherein the vehicle comprises sensors for determining occupancy of the surroundings, the method comprising the acts of:*

receiving sensor measurements of the surroundings of the vehicle;

determining the occupancies of the surroundings by obstacles based on the sensor measurements;

dividing the surroundings into regions;

for each region of the surroundings:

identifying multiple occupancies of the surroundings in the respective region;

determining a most certainly identified occupancy of the identified multiple occupancies in the respective region and a closest occupancy of the identified multiple occupancies, which closest occupancy is that occupancy in the respective region for which a shortest distance to the vehicle has been determined according to a distance determination specified for the respective region; and

providing the most certainly identified occupancy and the closest occupancy to a driver assistance system of the vehicle.

Appeal Br. 10 (emphasis added).

THE REJECTIONS

The following rejections are before us for review:

Claims 1, 2, 18, and 19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Nishiwaki (US 6,163,252, issued Dec. 19, 2000) and Okuda et al. (US 2011/0149690 A1, published June 23, 2011) (“Okuda”).²

Claims 3–17 are rejected under 35 U.S.C. § 103(a) as unpatentable over Nishiwaki, Okuda, and Borenstein et al. (US 5,006,988, issued Apr. 9, 1991) (“Borenstein”).

ANALYSIS

The rejection of claims 1, 2, 18, and 19 under 35 U.S.C. § 103(a) as unpatentable over Nishiwaki and Okuda.

Claims 1, 18, and 19 are the independent claims. Claim 1 recites a method for providing occupancy information for surroundings of a vehicle, the method comprising, *inter alia*, “for each region of the surroundings:” (1) “identifying multiple occupancies of the surroundings in the respective region” and (2) “determining a most certainly identified occupancy of the identified multiple occupancies in the respective region.” Claims 18 and 19 contain similar limitations.

The Examiner finds that Nishiwaki discloses the limitations of claim 1 reproduced above, but the Examiner acknowledges that Nishiwaki does not disclose the limitations related to “closest occupancy” and the “providing” step of claim 1 (Final Act. 2–4). The Examiner relies on Okuda as disclosing these missing limitations.

² The Examiner refers to the Okuda reference as “Denso” (Final Act. 2), the name of the assignee on Okuda’s published application. Okuda, (73).

Appellant argues that Nishiwaki, on which the Examiner relies, does not disclose the claim 1 limitation of “identifying multiple occupancies of the surroundings in the respective region” (Appeal Br. 4–6). According to Appellant, Nishiwaki discloses “dividing a region into a matrix of sub-regions E_i . . . however, there is only a single probability (i.e., alleged occupancy) in each of the sub-regions E_i ” (*id.* at 5) (reproducing Figure 5 of Nishiwaki).

Responding to Appellant’s argument, the Examiner states in the Answer:

nowhere in the claim has applicant defined what a “region” consists of (i.e., made up of); or quite simply put a region can simply be taken to mean the front area/portion of the car, the side areas/portions and/or the back area/portion – wherein each of either area and/or portion are equivalent terminologies for the word region.

(Ans. 9). According to the Examiner:

Therefore the most reasonable broadest interpretation is that Nishiwaki does in fact disclose a region as depicted in figure 5 which clearly shows, via a respective regional sensor, the detection of multiple objects/obstacles (i.e., each region can detect multiple obstacles).

(*Id.* at 10).

In other words, as best understood, the Examiner’s position is that any arbitrary group of Nishiwaki’s sub-regions E_i (such as the front/side/rear of the vehicle) is considered a claimed “region” under a broadest reasonable interpretation, and thus any arbitrary group of Nishiwaki’s regions E_i contains multiple identified occupancies as claimed.

In response to the Examiner’s Answer, Appellant argues that Nishiwaki does not disclose the claim 1 limitation of “determining a most

certainly identified occupancy in the respective region” (Reply Br. 2). According to Appellant, “Nishiwaki thus either fails to teach (a) identifying multiple occupancies for each region, or (b) determining a most certainly identified occupancy of the identified multiple occupancies” (*id.*). Appellant argues that, even under the Examiner’s broad interpretation of “region” in the Answer, Nishiwaki “still does not meet the claim limitation – which requires the affirmative determination of which of such multiple identified objects Z [“occupancies” of claim 1] is *the most certainly identified* of them all” (*id.*).

We agree with Appellant that the Examiner has not adequately explained how Nishiwaki discloses “determining a most certainly identified occupancy in the respective region” as called for in claims 1, 18, and 19. The Examiner’s rejection simply cites Nishiwaki’s probability-of-presence operation means 33 and 34 and probability distribution operation means 35 as disclosing the claimed “determining” step (Final Act. 3), without adequately explaining how the cited elements of Nishiwaki meet the claim language.

Nishiwaki discloses a device for detecting obstacles, for use in vehicles, using a plurality of sensor devices (Nishiwaki, Abstract). The operation of Nishiwaki’s device is described as follows:

The detection region-setting means 31, 32 and the probability-of-presence operation means 33, 34 in the signal processing means 3 are arranged in parallel to correspond to the sensor means 1 and 2.

The detection region-setting means 31 and 32 divide the region E to be detected around the vehicle C into a plurality of matrix-like detection regions E_i ($i=1$ to n)(see FIG. 2), and produce reception signals A_i , B_i ($i=1$ to n) for each of the detection regions E_i .

Based on the reception signals A_i and B_i , the probability-of-presence operation means 33 and 34 operate probabilities of the presence of the obstacle Z in the detection regions E_i as in-the-region presence probabilities P_i , Q_i ($i=1$ to n).

The probability distribution operation means 35 synthesizes the in-the-region presence probabilities P_i and Q_i for each of the detection regions E_i to operate the distribution of presence probabilities, and operates the final in-the-region presence probabilities R_i ($i=1$ to n) for each of the detection regions E_i in the distribution of presence probabilities.

Based on the in-the-region presence probabilities R_i in the distribution of presence probabilities, the obstacle detection means 36 judges the regions S where the obstacle Z exists, and detects the position and size of the obstacle Z from the regions S where the obstacle Z exists.

The obstacle detection means 36 includes a threshold value-setting means for setting a judging standard (threshold value) for the regions S where the obstacle exists, and a comparator means for comparing the in-the-region presence probabilities R_i with the threshold value, and judges the detection regions E_i that exhibit the in-the-region presence probabilities larger than the threshold value to be the regions S where the obstacle exists among the in-the-region presence probabilities R_i .

(*Id.* at 5:20–48). The operation of Nishiwaki's device is further described, with reference to Figures 4–7:

As shown in FIG. 4, therefore, the detection region-setting means 31 and 32 find the reception signals A_i , B_i for each of the detection regions E_i based on the levels of the reception signals A , B turned about the positions of the sensor means 1 and 2.

Then, the probability-of-presence operation means 33 and 34 find the in-the-region presence probabilities P_i and Q_i based on the reception signals A_i , B_i as shown in FIGS. 5 and 6.

The probability distribution operation means 35 synthesizes the in-the-region presence probabilities P_i and Q_i ,

and finds the final in-the-region presence probabilities R_i in the distribution of presence probabilities as shown in FIG. 7.

Finally, the obstacle detection means 36 compares the in-the-region presence probabilities R_i (see FIG. 7) in each of the detection regions E_i with a predetermined threshold value T_h , and produces the detection regions E_i that exhibit in-the-region presence probabilities R_i of not smaller than the threshold value T_h as the regions S where the obstacle Z exists.

In FIG. 7, for instance, the detection regions exhibiting the in-the-region presence probabilities R_p of levels of not smaller than the threshold value T_h are produced as the regions S where the obstacle exist.

(*Id.* at 6:32–55).

In other words, Nishiwaki discloses that probability-of-presence operation means 33 and 34 process data from sensor means 1 and 2, respectively (*id.*, Figure 1), to create in-the-region presence probabilities P_i and Q_i , respectively. P_i and Q_i are then synthesized by probability distribution operation means 35 to determine final in-the-region presence probabilities R_i for each region E_i . Then, each region's R_i is compared to a threshold value by the obstacle detection means 36, and only values not below the threshold are used to identify regions where an obstacle exists.

There is no discussion of “determining a most certainly identified occupancy” in any given region E_i or group of regions. Instead, Nishiwaki teaches that each region E_i has exactly one P_i , Q_i , and R_i . Every R_i value for every region is compared to a threshold value and essentially ignored if it is below the threshold. There is no comparison of probability values within a given region (i.e., no intra-region comparison), or from one region to another region (i.e., no inter-region comparison), to determine which probability is the most certain. Thus, it is not apparent how Nishiwaki discloses the

claimed “determining a *most certainly* identified occupancy of the identified multiple occupancies in the respective region” for *each* region, or, indeed, for any arbitrary group of regions.

For the foregoing reasons, the rejection of independent claims 1, 18, and 19, and claim 2, which depends from claim 1, is not sustained.

The rejection of claims 3–17 under 35 U.S.C. § 103(a) as unpatentable over Nishiwaki, Okuda, and Borenstein.

With regard to this rejection, the Examiner does not rely on the additional reference (Borenstein) to cure the deficiency discussed above. Thus, the rejection of claims 3–17 is not sustained for the reasons given above for not sustaining the rejection of independent claim 1 from which they depend.

NEW GROUND OF REJECTION

Claims 1–17 are rejected under 35 U.S.C. § 101 as being directed to judicially-expected subject matter.

Preliminary comment

After the Final Office Action was mailed on March 12, 2018, the U.S. Patent and Trademark Office (the “USPTO”) published revised guidance on January 7, 2019 for use by USPTO personnel in evaluating subject matter eligibility under 35 U.S.C. § 101. 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50, 57 (Jan. 7, 2019) (the “2019 Revised Guidance”).³ That guidance revised the USPTO’s

³ The USPTO issued an update on October 17, 2019 (the “October 2019 Update: Subject Matter Eligibility,” available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) clarifying the 2019 Revised Guidance in response to public comments.

examination procedure with respect to the first step of the *Mayo/Alice* framework by (1) “[p]roviding groupings of subject matter that [are] considered an abstract idea”; and (2) clarifying that a claim is not “directed to” a judicial exception if the judicial exception is integrated into a practical application of that exception. *Id.* at 50. The 2019 Revised Guidance, by its terms, applies to all applications, and to all patents resulting from applications, filed before, on, or after January 7, 2019. *Id.*

Introduction

35 U.S.C. § 101 provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor.”

In that regard, claim 1 covers a “process” and is thus statutory subject matter for which a patent may be obtained.⁴ This is not in dispute.

However, the 35 U.S.C. § 101 provision “contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

Notwithstanding claim 1 covers statutory subject matter, claim 1 is directed to an abstract idea. Specifically, we determine that claim 1 is directed to providing occupancy information for surroundings of a vehicle.

⁴ This corresponds to Step 1 of the 2019 Revised 101 Guidance which requires determining whether “the claim is to a statutory category.” 84 Fed. Reg. at 53. *See also id.* at 53–54 (“consider[] whether the claimed subject matter falls within the four statutory categories of patentable subject matter identified by 35 U.S.C. 101.”).

Alice identifies a two-step framework for determining whether claimed subject matter is directed to an abstract idea. *Alice*, 573 U.S. at 217. *Alice* step one — the “directed to” inquiry:

According to *Alice* step one, “[w]e must first determine whether the claims at issue are *directed to* a patent-ineligible concept.” *Alice*, 573 U.S. at 218 (emphasis added).

*Claim Construction*⁵

We consider the claim as a whole giving it the broadest reasonable construction as one of ordinary skill in the art would have interpreted it in light of the Specification at the time of filing.^{6,7,8}

Claim 1 recites three initial steps: the first step calls for “receiving” certain information about the surroundings of a vehicle, the second step calls

⁵ “[T]he important inquiry for a § 101 analysis is to look to the claim.” *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013). “In *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can.*, 687 F.3d 1266, 1273 (Fed. Cir. 2012), the court observed that ‘claim construction is not an inviolable prerequisite to a validity determination under § 101.’ However, the threshold of § 101 must be crossed; an event often dependent on the scope and meaning of the claims.” *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347–48 (Fed. Cir. 2015).

⁶ “In determining the eligibility of respondents’ claimed process for patent protection under § 101, their claims must be considered as a whole.” *Diamond v. Diehr*, 450 U.S. 175, 188 (1981).

⁷ “First, it is always important to look at the actual language of the claims. . . . Second, in considering the roles played by individual limitations, it is important to read the claims ‘in light of the specification.’” *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1378 (Fed. Cir. 2017) (J. Linn, dissenting in part and concurring in part) (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) among others).

⁸ See 2019 Revised 101 Guidance, 84 Fed. Reg. at 52, footnote 14 (“*If a claim, under its broadest reasonable interpretation . . .*” (emphasis added)).

for “determining” information based on the received information, and the third step calls for “dividing the surroundings into regions.” Next, claim 1 recites three additional steps that are performed “for each region of the surroundings:” “identifying” information, “determining” additional information, and “providing” the determined information to “a driver assistance system of the vehicle.”

Notably, claim 1 does not identify any particular device or entity that performs the recited steps. The preamble of claim 1 indicates that “the vehicle comprises sensors” and the final limitation of claim 1 calls for “providing” information to “a driver assistance system.” Yet, claim 1 does not indicate that any claimed steps are performed by the sensors or by the driver assistance system. For example, claim 1 does not specify that a computer or other device performs any of the “receiving,” “determining,” “dividing,” “identifying,” “determining,” and “providing” steps. We note that the Specification describes, by way of example, that “[i]n a further aspect, a computer program is set up to prompt a computer, when executed, to carry out a method according to the invention.” Spec. para. 19. Yet, the Specification makes clear that the claims are not limited to any particular disclosed embodiments or aspects. *See id.* para. 32 (“The foregoing disclosure has been set forth merely to illustrate the invention and is not intended to be limiting.”)

Accordingly, as reasonably broadly construed in light of the Specification, the “receiving,” “determining,” “dividing,” “identifying,” “determining,” and “providing” steps of claim 1 encompass any entity performing the recited method steps.

Given the method as claimed and in light of the Specification, we reasonably broadly construe claim 1 as being directed to a method for providing occupancy information for surroundings of a vehicle that encompasses any entity, including the human mind, performing the steps of the method.

*The Abstract Idea*⁹

Above, where we reproduce claim 1, we identify in italics the limitations we believe recite an abstract idea.¹⁰ Based on our claim construction analysis (above), we determine that the identified limitations describe a method of providing occupancy information for surroundings of a vehicle. Because claim 1 encompasses any entity performing the recited steps, including the human mind, it falls within the enumerated “[m]ental processes” grouping of abstract ideas set forth in the 2019 Revised 101

⁹ This corresponds to Step 2A of the 2019 Revised 101 Guidance. Step 2A determines “whether a claim is ‘directed to’ a judicial exception,” such as an abstract idea. Step 2A is two prong inquiry.

¹⁰ This corresponds to Prong One (a) of Step 2A of the 2019 Revised 101 Guidance. “To determine whether a claim recites an abstract idea in Prong One, examiners are now to: (a) Identify the specific limitation(s) in the claim under examination (individually or in combination) that the examiner believes recites an abstract idea.” 84 Fed. Reg. at 54.

Guidance.¹¹ 2019 Revised 101 Guidance, 84 Fed. Reg. at 52. For example, claim 1 encompasses a person observing sensor measurements, identifying “multiple occupancies of the surroundings” in each region, evaluating that information, and providing a judgment about that information to a driver assistance system of the vehicle.

*Technical Improvement*¹²

Claim 1 is not limited to a specific implementation of a technological improvement to driver assistance systems. As discussed above, claim 1 generically provides for receiving and evaluating information by some

¹¹ This corresponds to Prong One [“Evaluate Whether the Claim Recites a Judicial Exception”] (b) of Step 2A of the 2019 Revised 101 Guidance. “To determine whether a claim recites an abstract idea in Prong One, examiners are now to: . . . (b) determine whether the identified limitation(s) falls within the subject matter groupings of abstract ideas enumerated in Section I of the [2019 Revised 101 Guidance].” 84 Fed. Reg. at 54. This case implicates subject matter grouping “(c):” “(c) Mental processes — concepts performed in the human mind (including an observation, evaluation, judgment, opinion).” *Id.* at 52 (footnotes omitted).

¹² This corresponds to Prong Two [“If the Claim Recites a Judicial Exception, Evaluate Whether the Judicial Exception Is Integrated Into a Practical Application”] of Step 2A of the 2019 Revised 101 Guidance. “A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” 84 Fed. Reg. at 54. One consideration, implicated here, that is “indicative that an additional element (or combination of elements) may have integrated the exception into a practical application” is if “[a]n additional element reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” *Id.* at 55 (footnotes omitted).

unspecified entity. Claim 1 does not require even a generic computer or computer memory, and thus does not involve any particular way of organizing information in a computer. *Cf. Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016) (holding that claims directed to organization of data in a table in computer memory and a system for indexing that data involved an improvement to computer functionality itself). Claim 1 also does not recite specific details of the sensors or the driver assistance system. It does not, for example, involve any particular configuration of sensors. *Cf. Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017) (finding patent eligibility where the “claims specify a particular configuration of inertial sensors and a particular method of using the raw data from the sensors”). The Specification describes the configuration of the sensors, as well as methods for identifying occupancies, as conventional.¹³

We note that the Specification describes that an objective of the invention is to provide occupancy information in an efficient way that “demands less memory space and transmission time, and at the same time provides the necessary information” that is “particularly advantageous for real-time systems.” Spec. para. 8. Yet, claim 1 does not recite any “memory,” “memory space,” or “real-time systems,” and thus claim 1 clearly does not require any arguably inventive improvement to computer technology that may be described in the Specification. *See Accenture Glob.*

¹³ Spec. para. 3 (“[T]he surroundings are scanned or recorded using one or more sensors, such as radar, lidar, camera, ultrasonic sensors or similar sensors known from the prior art. Signal processing methods that are likewise known in the prior art can then be used to identify the occupancy of the surroundings by an obstacle”).

Servs., GmbH v. Guidewire Software, Inc., 728 F.3d 1336, 1345 (Fed. Cir. 2013) (“[T]he complexity of the implementing software or the level of detail in the specification does not transform a claim reciting only an abstract concept into a patent-eligible system or method.”); *see also Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1322 (Fed. Cir. 2016) (“The district court erred in relying on technological details set forth in the patent’s specification and not set forth in the claims to find an inventive concept.” (citing *Accenture*, 728 F.3d at 1345, and *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014))).

By so broadly defining the inventive method, that is, by setting out what it is aspiring to accomplish without any means for achieving it, let alone any purported technological improvement, the claim is in effect presenting the invention in purely result-based functional language, strengthening our determination under *Alice* step one that the claim is directed to an abstract idea. *Cf. Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (“Claim 1 recites a method for routing information using result-based functional language. The claim requires the functional results of ‘converting,’ ‘routing,’ ‘controlling,’ ‘monitoring,’ and ‘accumulating records,’ but does not sufficiently describe how to achieve these results in a non-abstract way.”).

*Alice step two — Does the Claim Provide an Inventive Concept?*¹⁴

Step two is “a search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 217–18 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 73 (2012) (alteration in original)).

The Supreme Court stated in *Bilski* that, albeit it “is not the sole test for deciding whether an invention is a patent-eligible ‘process,’” the machine-or-transformation test is still a “useful and important clue” and “investigative tool” for determining whether some claimed methods are statutory processes. *Bilski v. Kappos*, 130 S. Ct. 3218, 3221 (2010). Here, the only mention of any “machine” is found in the preamble of claim 1 (“the vehicle comprises sensors”) and the recitation in the final step of providing information to “a driver assistance system.” As noted above in our discussion of claim construction, claim 1 does not require that any claimed steps are performed by the sensors or by the driver assistance system. Each of the “receiving,” “determining,” “dividing,” “identifying,” “determining,” and “providing” steps of claim 1 is performed by some unspecified entity. Therefore, we determine that the process of claim 1 is not tied to any particular machine or apparatus. We also do not see that claim 1 involves

¹⁴ This corresponds to Step 2B, of the 2019 Revised 101 Guidance, 84 Fed. Reg. at 56 “if a claim has been determined to be directed to a judicial exception under revised Step 2A, examiners should then 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).”

any transformation of the underlying subject matter into a different state or thing. Although claim 1 involves information about “surroundings of a vehicle,” claim 1 does not purport to transform the surroundings or the vehicle in any way.

In our analysis above under step one of the *Alice* framework, we also addressed the matter of whether the claims present any purported specific asserted technical improvements. This is consistent with decisions of our reviewing court. *See Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1347 (Fed. Cir. 2018) (“We have several times held claims to pass muster under *Alice* step one when sufficiently focused on such improvements.”).

We have reviewed the claim in light of the Specification and, as explained above, we find the claimed subject matter insufficiently expresses a technical improvement as a result of performing the functions as broadly as they are recited.

We cited the Specification in our earlier discussion. It is intrinsic evidence that the “sensors” set forth in the preamble are conventional. *See* Spec ¶ 3 (“one or more sensors, such as radar, lidar, camera, ultrasonic sensors or similar sensors known from the prior art”). In doing so, we have followed “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP Inc.*), 881 F.3d 1360 (Fed. Cir. 2018),” USPTO Memorandum, Robert W. Bahr, Deputy Commissioner For Patent Examination Policy, April 19, 2018 (the “*Berkheimer* Memo”).

The court in *Berkheimer* held that “[t]he patent eligibility inquiry may contain underlying issues of fact.” *See Berkheimer*, 881 F.3d at 1365 (citing *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325

(Fed. Cir. 2016) (“The § 101 inquiry ‘*may* contain underlying factual issues.” (citation omitted))). But the court also held that “[w]hen there is *no genuine issue of material fact* regarding whether the claim element or claimed combination is well-understood, routine, [and] conventional to a skilled artisan in the relevant field, this issue can be decided on summary judgment as a matter of law.” *Berkheimer*, 881 F.3d at 1368 (emphasis added). This qualification has been subsequently reiterated.

If there is a genuine dispute of material fact, Rule 56 requires that summary judgment be denied. In *Berkheimer*, there was such a genuine dispute for claims 4–7, but not for claims 1–3 and 9.

....

[I]n accordance with *Alice*, we have repeatedly recognized the absence of a genuine dispute as to eligibility for the many claims that have been defended as involving an inventive concept based merely on the idea of using existing computers or the Internet to carry out conventional processes, with no alteration of computer functionality.

Berkheimer v. HP Inc., 890 F.3d 1369, 1371, 73 (Fed. Cir. 2018) (Order, On Petition for rehearing en banc, May 31, 2018 (J. Moore concurring)); *see also Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1368 (Fed. Cir. 2018) (Order On Petition for Rehearing En Banc) (Reyna, J., dissenting) (“A factual allegation or dispute should not automatically take the determination out of the court’s hands; rather, there needs to be justification for why additional evidence must be considered—the default being a legal determination.”).

Here, the Specification indisputably shows the recited “sensors” individually and in the context of a vehicle as recited in the preamble were conventional at the time of filing. Accordingly, there is sufficient factual

support for the well-understood, routine, or conventional nature of the claimed “sensors” individually or in the combination as claimed.

Dependent claims 2–17

The dependent claims add various information processing schemes that do little to patentably transform the abstract idea into a patent-eligible application. The dependent claims do not, for example, add any particular machine or require any particular configuration of sensors. For example, claim 2 depends from claim 1 and broadly recites “wherein regions in a direction of travel in front of the vehicle each cover an angular range from the vehicle.” Claim 2 does not specify any details for achieving the functional result that the regions cover an angular range from the vehicle. Thus, claim 2 encompasses any means for achieving the claimed result. Claim 15 broadly recites “[t]he method according to claim 1, further comprising the act of: combining the most certainly identified occupancies of multiple regions to form one continuous occupancy.” Again, no details for achieving this functional result are provided.

For the forgoing reasons, we enter a new ground of rejection of claims 1–17 under 35 U.S.C. § 101.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed	New Ground
1, 2, 18, 19	103	Nishiwaki, Okuda		1, 2, 18, 19	
3–17	103	Nishiwaki, Okuda, Borenstein		3–17	
	101	Eligibility			1–17

Overall Outcome				1-19	1-17
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NEW GROUND

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” 37 C.F.R. § 41.50(b) also provides that the Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner
- (2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

REVERSED; 37 C.F.R. § 41.50(b)