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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN W. PEAKE and STEPHAN PLEINES

Appeal 2017-008871
Application 14/293,739
Technology Center 3600

Before GEORGE R. HOSKINS, BRANDON J. WARNER, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ Trimble Navigation Limited appeals under 35 U.S.C.
§ 134(a) from the Examiner's decision rejecting claims 1–3, 5–15, 17, 21,
23, 24, and 26. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ Trimble Navigation Limited is the applicant and is identified as the real party in interest. Appeal Br. 3.

THE CLAIMED SUBJECT MATTER

Appellant's invention is "related to agricultural autopilots for vehicles that pull or push farm implements." Spec. ¶ 2. Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A method for guiding a towed implement to a desired path comprising:
 - an autopilot guiding a vehicle towing the implement;
 - the autopilot first guiding the vehicle across the desired path by an offset distance that is pre-determined for the vehicle and implement; and,
 - the autopilot then guiding the vehicle back to the desired path.

REJECTIONS

1. Claims 1–3, 5–8, 12, 13, 15, 17, 21, 23, 24, and 26 are rejected under 35 U.S.C. § 103 as unpatentable over Peake (US 2012/0296529 A1, published Nov. 22, 2012) and Rekow (US 2009/0326763 A1, published Dec. 31, 2009).²
2. Claims 9–11 are rejected under 35 U.S.C. § 103 as unpatentable over Peake, Rekow, and Dix (US 2008/0249692 A1, published Oct. 9, 2008).
3. Claim 14 is rejected under 35 U.S.C. § 103 as unpatentable over Peake, Rekow, and McClure (US 2009/0099730 A1, published Apr. 16, 2009).

² The Examiner has withdrawn this rejection as to claims 4, 16, 18–20, 22, and 25. *See* Ans. 2.

DISCUSSION

Rejection 1

The Examiner relies on Peake for disclosing “an autopilot guiding a vehicle towing the implement,” but acknowledges that Peake does not disclose “the autopilot first guiding the vehicle across the desired path by an offset distance that is pre-determined for the vehicle and implement; and the autopilot then guiding the vehicle back to the desired path.” Final Act. 9–10. The Examiner finds that Rekow discloses these limitations. *Id.* at 10 (citing Rekow ¶¶ 5, 44–46, Figs. 2, 3). Appellant contends that Rekow does not disclose these limitations because “to the extent that Rekow mentions a ‘vehicle offset’, it is a dynamically changing value, not a pre-determined constant. Rekow’s ‘vehicle path with compensation’ 300 is the result of a dynamic updating procedure.” Appeal Br. 16. In support of this contention, Appellant argues that the recited “offset distance is a parameter that depends on properties of the towing vehicle and the towed implement. It can be estimated by computer simulation and modeling. Once that work is done, the offset distance is pre-determined for the vehicle and implement.” *Id.* at 14 (citing Spec. ¶¶ 36, 39).

The resolution of the appeal of this rejection revolves around the construction of the phrase “an offset distance that is pre-determined for the vehicle and implement” in independent claims 1 and 23. In particular, the question is at what point in time must the offset distance be “pre-determined” in the context of the claims. As noted above, Appellants take the position that the offset distance is a “pre-determined constant” that may be estimated by computer simulation and modeling, while the Examiner

takes the position that “if the offset distance is determined along any part of the route, the offset distance is pre-determined.” Final Act. 5; Ans. 6.

We give claim terms their broadest reasonable interpretation consistent with the Specification as it would be interpreted by one of ordinary skill in the art. See *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1259–60 (Fed. Cir. 2010); *In re Morris*, 127 F.3d 1048, 1054–55 (Fed. Cir. 1997). Although the claims are interpreted in light of the Specification, limitations from the Specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). However, “[t]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation.” *In re Skvorecz*, 580 F.3d 1262, 1267 (Fed. Cir. 2009).

We begin our analysis with the claim language. *In re Power Integrations, Inc.*, 884 F.3d 1370, 1376 (Fed. Cir. 2018) (“[c]laim construction must begin with the words of the claims themselves.”). The entire claim limitation at issue in claim 1 is “the autopilot first guiding the vehicle across the desired path by an offset distance that is pre-determined for the vehicle and implement.”³ Given that “pre-determined” is recited in the context of the autopilot guiding the vehicle across the desired path by an offset distance, the logical conclusion is that “pre-determined” requires that the offset distance be determined *prior to* guiding the vehicle across the desired path. We look to the Specification to determine whether such an interpretation is supported.

³ The claim limitation at issue in claim 23 is substantially the same except it requires the autopilot be programmed to guide the vehicle as recited in claim 1. Appeal Br. 43 (Claims App.).

Appellant's Figure 2 illustrates a tractor 205 guided by an autopilot, and towing implement 210. Spec. ¶ 35, Fig. 2. The desired path is represented by dotted line 215. *Id.* Offset path 220 is offset from the desired path 215 by offset distance *d*. *Id.* As can be seen by tractor path 225 in Figure 2, the tractor is guided across desired path 215 to offset path 220 and then back to desired path 215. *Id.* The Specification provides that "the offset is a predetermined constant. It is known *before the vehicle reaches the path.*" Spec. ¶ 36 (emphasis added). The Specification, thus, supports our reading of the claim language itself noted above. We, therefore, determine that one of ordinary skill in the art after reading the claim language, in light of the Specification, would reasonably understand that "pre-determined" requires that the offset distance be determined prior to the autopilot guiding the vehicle across the desired path. In the context of Appellant's Figure 2 for example, our construction requires that the offset distance be determined no later than the point in time that tractor 205 first reaches desired path 215. The Examiner's interpretation that the offset distance can be determined "at any time, including at the moment (time, distance, or space) the vehicle turns back toward the desired path" (Final Act. 5–6; Ans. 6, 10–11) is unreasonably broad because, in the context of Appellants' Figure 2, the offset distance could then be determined after tractor 205 crosses desired path 215 until the point that it reaches offset path 220, thereby rendering it no longer "pre-determined" within the context of Appellants' disclosure.

In support of the rejection, the Examiner explains that in Figure 3 of *Rekow*, "the vehicle is traveling on a path, this path represents the motion of the vehicle and implement," and that "when following the path with

compensation, the vehicle crosses over (overshoots) the targeted implement path by a distance,” which the Examiner asserts corresponds to the “offset distance” recited in claim 1. Ans. 11. In addition, the Examiner asserts that this offset distance is “predetermined” because Rekow discloses that the offset distance is “defined by equations and those equations depend upon vehicle and implement characteristics.” *Id.* at 12 (cited Rekow ¶ 46). While we appreciate the Examiner’s reference to the discussion of equations in paragraph 46 of Rekow, the Examiner does not direct us to any portion of Rekow to support a finding that Rekow calculates or determines the offset distance *before* the vehicle crosses the desired path (solid straight horizontal line) in Figure 3 of Rekow, nor do we discern any support for such a finding in Rekow. We, thus, do not sustain the rejection of independent claims 1 and 23 because the Examiner has not established that the offset distance in Rekow is “pre-determined” as we have construed that term. Claims 2, 3, 5–8, 12, 13, 15, 17, and 21 depend from claim 1, and claims 24 and 26 depend from claim 23. Appeal Br. 40–44 (Claims App.). We do not sustain the rejection of these dependent claims for the same reasons.

Rejections 2 and 3

Claims 9–11 and 14 depend from claim 1. Appeal Br. 41 (Claims App.). The Examiner does not rely on the additional cited disclosure from Dix and McClure to cure the deficiencies in the rejection of claim 1 discussed above. Final Act. 22–25. The Examiner relies on McClure as disclosing the limitation in claim 14 reciting “the offset distance added to the cross-track error *before the vehicle crosses the desired path.*” *Id.* at 24 (citing McClure ¶¶ 7, 9, 10, 94, 110, 122, 146); Appeal Br. 41 (Claims App.) (emphasis added). However, we have reviewed the cited disclosures of

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McClure, and we do not find any disclosure reflecting that the offset distance is determined prior to guiding the vehicle across the desired path. We, thus, do not sustain the rejections of claims 9–11 and 14 for the same reasons discussed above in connection with the rejection of claim 1.

DECISION

The Examiner's decision rejecting claims 1–3, 5–15, 17, 21, 23, 24, and 26 is reversed.

REVERSED