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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROLF ZOELLER and RUEDIGER ROPPEL

Appeal 2019-002404
Application 15/452,875
Technology Center 3600

Before CYNTHIA L. MURPHY, KENNETH G. SCHOPFER, and ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SCHOPFER, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–14 and 16–18. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as "Dr. Ing. h.c. F. Porsche Aktiengesellschaft." Appeal Br. 1.

BACKGROUND

The Specification discloses that "[t]he present invention relates to a method for implementing at least one function provided by an external server in a control device of a vehicle." Spec. ¶ 2.

CLAIMS

Claims 1, 9, and 10 are the independent claims on appeal. Claim 1 is illustrative of the appealed claims and recites:

> 1. A method for implementing at least one target function in at least one controller of a vehicle, the at least one target function being provided by an external server, the method comprising:
>
> transmitting the at least one target function in a first data format from the external server via a wireless interface to a management computer arranged in the vehicle;
>
> converting, by the management computer, the at least one target function in the first data format to a data format of the vehicle;
>
> accessing, by the management computer, a controller area network (CAN) bus of the vehicle; and
>
> flashing, by the management computer via the CAN bus, the at least one controller of the vehicle so as to implement the at least one target function in the at least one controller of the vehicle,
>
> wherein the flashing, by the management computer, the at least one controller of the vehicle so as to implement the at least one target function in the at least one controller of the vehicle comprises altering control software of the vehicle, and
>
> wherein the at least one controller of the vehicle is configured to control the vehicle in accordance with the at least one target function and to execute the control software that is altered.

Appeal Br. 13.

REJECTIONS[2]

1. The Examiner rejects claims 1–7, 9, 10, 12, 13, 15, and 18 under 35 U.S.C. § 103 as unpatentable over Ishida[3] in view of Matsuura.[4]
2. The Examiner rejects claims 8, 16, and 17 under 35 U.S.C. § 103 as unpatentable over Ishida in view of Matsuura and Nishimoto.[5]
3. The Examiner rejects claims 11 and 14 under 35 U.S.C. § 103 as unpatentable over Ishida in view of Matsuura and Kouda.[6]

DISCUSSION

With respect to the rejection over Ishida in view of Matsuura, we are persuaded of reversible error by Appellant's arguments regarding independent claims 1, 9, and 10, as discussed below.

Claims 1, for example, recites the step of "flashing . . . so as to implement" a target function in a vehicle controller, "wherein the flashing . . . comprises altering control software of the vehicle" and the controller is configured "to execute the control software that is altered." Appeal Br. 13. Independent claims 9 and 10 include a management computer that is configured to execute a flashing step and a controller that is configured to execute altered control software. *Id.* at 14–15. We are persuaded by Appellant's argument that the Examiner has not established that the art of

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[2] The Examiner has withdrawn the rejections under 35 U.S.C. § 112.
[3] Ishida et al., US 8,874,303 B2, iss. Oct. 28, 2014.
[4] Matsuura, US 6,025,776, iss. Feb. 15, 2000.
[5] Nishimoto et al., US 9,120,452 B2, iss. Sept. 1, 2015.
[6] Kouda et al., US 7,631,056 B2, iss. Dec. 8, 2009.

record teaches such functionality under the broadest reasonable interpretation of the claims.

We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims "their broadest reasonable interpretation consistent with the specification" and "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). Appellant asserts that the Examiner has provided too broad an interpretation of the claimed "flashing" step and the requirement that it "comprises altering control software of the vehicle." *See* Appeal Br. 8–10; *see also* Reply Br. 3–4.

With respect to what is required by the "flashing" step of claim 1, although the Specification does not provide a precise definition of the term flashing, the Specification does provide an express definition of the term "implement." Specifically, the Specification discloses that "the term 'implement' is to be understood to be a process in which a function is transferred to a respective control device and is deposited there executably. In particular, 'implement' is to be understood to be a flashing process." Spec. ¶ 15. Given this definition, we find that one of ordinary skill in the art would understand the claimed "flashing" step to require a process in which a target function is transferred to a control device and deposited there executably.

With respect to the phrase "altering control software," the Specification does not provide a precise definition. However, we agree with Appellant that, in light of the Specification, it should not be interpreted "so broad as to encompass the mere transmission of data" or "the execution of

preconfigured logic." Reply Br. 4. Rather, the Specification indicates that the broadest reasonable interpretation of this phrase requires that "the functionality of the control software" is changed, as opposed to a mere selection of what functionality to execute. *Id.* For example, the Specification discloses that the invention seeks to solve problems wherein a vehicle must be brought to a technician to receive updated programming. Spec. ¶ 3. The Specification discloses that this problem may be solved by transmitting functions to the vehicle wirelessly so as to provide a vehicle with updated software versions without visiting a workshop. *Id.* at ¶¶ 10, 20. The Specification further discloses the invention relates to specifically altering the configuration of preconfigured control devices. *Id.*at ¶ 21. In light of this disclosure, we find that one of ordinary skill in the art would understand the phrase "altering control software" requires that the software is changed or rewritten to include new functionality.

In light of the above claim interpretation, we agree with Appellant that the Examiner has not established that the art of record discloses a flashing step that implements a target function by altering control software of a vehicle, as claimed. In the rejection, the Examiner first indicates that Ishida teaches a flashing step as claimed. *See* Final Act. 10–11. However, the Examiner does not precisely explain what cited portion of Ishida teaches such a step. *Id.* at 9–10. Further, the Examiner appears to indicate that Ishida does not teach "flashing," as required by claim 15. *See id.* at 20. However, the Examiner clarifies in the Answer that the rejection does rely on Ishida as teaching "flashing" as claimed. *See* Ans. 6. Here, the Examiner indicates that Ishida teaches flashing in order to alter control software in the

form of "switching device 98 that is capable or configured to switch difficulty level." *Id.* (citing Ishida Figs. 5, 6; col. 7, l. 39–col. 8, l. 18).

However, we agree with Appellant that the claimed process, as interpreted above, does not read on the process described by Ishida. The cited portion of Ishida provides a description of a flow chart related to controlling fuel-saving driving evaluations. Ishida col. 7, ll. 36–38. Ishida discloses that selection of evaluation mode occurs, which is transmitted to an in-vehicle unit 9. *Id.* at col. 7, ll. 39–50. Thereafter, Ishida teaches evaluating certain driving parameters in relation to the selected evaluation mode, after which an evaluation is provided to the user. *Id.* at col. 7, ll. 50–67. We see no indication here or in any other cited portion of Ishida that indicates that any flashing, as required by the claim, is occurring. For example, we agree with Appellant that the flow chart and description cited by the Examiner only discloses that an indication of a selected mode is transmitted to a vehicle controller in order to provide an evaluation of a driver based on the selected mode, after which an evaluation of driving takes place by the evaluation system based on the mode selected. There is no indication in this description that the functionality of the software is changed to add new functionality as required by the flashing step in claim 1.

Based on the foregoing, we are persuaded of error in the rejection of claim 1. For the same reasons, we are persuaded of error in the rejection of independent claims 9 and 10 as well as dependent claims 2–7, 12, 13, 15, and 18. Regarding the other obviousness rejections, those rejections do not provide any indication that the additional art cited, i.e., Nishimoto and Kouda, would cure the deficiency in the rejection of the independent claims. Thus, we are also persuaded of error with respect to the rejections of claims

8, 11, 14, 16, and 17. Accordingly, we do not sustain the rejections of claims 1–14 and 16–18.

CONCLUSION

We REVERSE the rejections of claims 1–14 and 16–18.

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–7, 9, 10, 12, 13, 15, 18	103	Ishida, Matsuura		1–7, 9, 10, 12, 13, 15, 18
8, 16, 17	103	Ishida, Matsuura, Nishimoto		8, 16, 17
11, 14	103	Ishida, Matsuura, Kouda		11, 14
Overall Outcome				1–14, 16–18

REVERSED