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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 13/112,609 | 05/20/2011 | Thomas MUELLER | 090922-0109 | 7840 |

31824 7590 12/02/2016
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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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2683

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

12/02/2016

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS MUELLER and ANDREAS HALLER

Appeal 2015-006718
Application 13/112,609
Technology Center 2600

Before ST. JOHN COURTENAY III, THU A. DANG, and
LARRY J. HUME, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1, 2, 4–7, and 9–19. Appellants have previously canceled claims 3 and 8. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

A. THE INVENTION

According to the Appellants, the invention relates to “a circuit arrangement and method for controlling communication between a control circuit and a transmitter/receiver unit via a supply line.” Spec. ¶ 2.

B. ILLUSTRATIVE CLAIM

1. A transmitter/receiver unit for communicating with a control circuit via a supply line, comprising:

a supply input for connecting the supply line;

an energy storage unit that with a first connection is coupled to the supply input, and that is configured to provide an internal energy supply during a reduction of the average supply voltage at the supply;

a detection unit that is coupled to the supply input, and that is configured to detect a reduction of the average supply voltage, and configured to provide an evaluation signal based on the reduction of the average supply voltage and a reference potential; and

a data transmission unit that is coupled to the detection unit and to the supply input, and that is configured to determine a duration over which the average voltage supply was reduced based on the evaluation signal and to send a data signal via the supply line when the duration over which the average voltage supply was reduced corresponds to a predetermined time period that identifies the transmitter/receiver unit for data transmission.

C. REJECTIONS

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal:

| | | |
|---------------------------------|--------------------|---------------|
| Takezoe et al. ("Takezoe") | US 5,448,231 | Sept. 5, 1995 |
| Issa et al. ("Issa") | US 5,900,806 | May 4, 1999 |
| DeHart et al. ("DeHart") | US 2003/0097482 A1 | May 22, 2003 |
| Marquant et al. ("Marquant") | US 2009/0020439 A1 | Jan. 22, 2009 |

Claims 1, 2, 4–7, 9–13, and 15–19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of DeHart, Takezoe, and Issa.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of DeHart, Takezoe, Issa, and Marquant.

II. ISSUE

The principal issue before us is whether the Examiner erred in finding the combination of DeHart, Takezoe, and Issa teaches or would have suggested:

[A] data transmission unit . . . that is configured to determine a duration over which the average voltage supply was reduced based on the evaluation signal and *to send a data signal via the supply line when the duration over which the average voltage supply was reduced corresponds to a predetermined time period that identifies the transmitter/receiver unit for data transmission.*
(claim 1).

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

DeHart

1. DeHart discloses a minimum specified processing time and an encoder that reduces the voltage on a two-wire bus. (DeHart ¶ 72).

Takezoe

2. Takezoe discloses an average voltage on a transmission line. (Takezoe, col. 3, ll. 44–48).

Issa

3. Issa discloses using different pulse widths with corresponding alarm responses to reduce false alarms caused by transient events. (Issa, col. 21, ll. 40–57, col. 23, ll. 42–43).

IV. ANALYSIS

Claims 1, 2, 4–7, 9–13, and 15–19

As to representative claim 1, Appellants contend “the transmission scheme according to DeHart is different from independent claim 1” (App. Br. 17). Appellants also contend “Takezoe is not seen to teach or suggest detecting an average supply signal change or identification based on the duration of the average voltage supply” (App. Br. 19). Thus, Appellants argue the combination of Takezoe with Dehart does not teach “a detection unit” as claimed (App. Br. 20).

Appellants then contend “Issa is seen to use a form of alarm sensor multiplexing” wherein “Issa is not seen to describe that a trigger for a transmission may have a predefined duration.” (App. Br. 22). According to

Appellants, Issa merely discloses “the transmission of the sensor itself may have a predefined duration for communicating information with respect to an alarm type.” (*Id.*).

Appellants further argue there is a lack of motivation to combine Takezoe with Dehart (App. Br. 20) because “Dehart is not seen to relate to the subject matter” (App. Br. 18). Appellants also contend Issa is non-analogous art, because “Issa is not seen to be reasonably pertinent to the problem faced by the inventors in the present application” (App. Br. 23–24). Appellants also contend a lack of motivation to combine Dehart’s communication system with the Issa disclosure. (App. Br. 26).

We have considered all of Appellants’ arguments and evidence presented. However, we disagree with Appellants’ contentions regarding the Examiner’s rejections of the claims. Instead, we agree with the Examiner’s findings, and find no error with the Examiner’s conclusion that the argued claims would have been obvious over the combined teachings. Therefore, we adopt the Examiner’s findings and legal conclusions, which we incorporate herein by reference.

We note Appellants appear to be arguing that Takezoe and Dehart fail to individually disclose the “detection unit” as claimed (App. Br. 20), but, as the Examiner points out, “[o]ne cannot show nonobviousness by attacking references individually where the rejections are based on the combination of references” (Ans. 23). The test for obviousness is what the combination of the references would have suggested to one of ordinary skill in the art. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Here, we find no error with the Examiner’s finding that the combination of Takezoe,

Dehart and Issa discloses and suggests the contested limitations as claimed (Ans. 23).

Similarly, although Appellants argue Issa is not understood to teach or suggest the “data transmission unit” configured to send a data signal via the supply line when “the duration over which the average voltage [supply] was reduced corresponds to a predetermined time period” as claimed, we agree with the Examiner that the *combination* of the references teaches or suggests this limitation. (Final Act. 3–5). We agree with the Examiner’s finding that DeHart’s encoder, at the end of a minimum specified processing time, lowers the voltage indicating that a communication from the remote will follow. Thus, we find no error with the Examiner’s reliance on *DeHart* in *combination* with *Issa* for teaching or at least suggesting “a data transmission unit . . . to send a data signal via the supply line when the duration over which the average voltage supply was reduced corresponds to a predetermined time period that identifies the transmitter/receiver unit for data transmission.” (FF 1, Final Act. 3–4).

Furthermore, we disagree with Appellants’ argument that “there is no motivation for one of skill in the art to apply the Issa disclosure to the two-wire communication apparatus described in DeHart” (App. Br. 23) because we find the Examiner set forth sufficient “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). *See also* 35 U.S.C. § 132. We are not convinced of error with the Examiner's finding that one of ordinary skill in the art would have been motivated to modify DeHart’s detection to include Takezoe’s average voltage detection to prevent an error from incidental minor voltage dips (FF 2, Final Act. 4), and to further modify

DeHart's communication signal to include Issa's pulse width identification system. (FF 3, Final Act. 5.)

We are guided by the Supreme Court's view of the prior art as a *combination* of teachings from different sources and the use of those teachings by a practitioner in the art. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007):

To determine whether there was an apparent reason to combine the known elements in the way a patent claims, it will often be necessary to look to interrelated teachings of multiple patents; to the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art.

(*Id.*)

The Supreme Court further guides: an improved product in the art is obvious if that “product [is] not [one] of innovation but of ordinary skill and common sense.” *KSR*, 550 U.S. at 421. We find this reasoning is applicable here. Thus, we find the Examiner's proffered combination of DeHart, Takezoe and Issa would have merely been a “predictable use of prior art elements according to their established functions.” *KSR*, 550 U.S. at 417.

Moreover, Appellants have not provided any evidence that combining the familiar elements and/or practices described in the Examiner's proffered combination of DeHart, Takezoe, and Issa would have been “uniquely challenging or difficult for one of ordinary skill in the art” (*Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007)), or would have yielded unexpected results.

Regarding Appellants' arguments that Issa is directed to solving a different problem (App. Br. 24), we are not persuaded by these arguments and we adopt the Examiner's findings. (Ans. 26–27). We note our

reviewing court guides: “[a] finding that two inventions were designed to resolve different problems . . . is insufficient to demonstrate that one invention teaches away from another.” *Nat'l Steel Car, Ltd. v. Canadian Pac. Ry., Ltd.*, 357 F.3d 1319, 1339 (Fed. Cir. 2004). “In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee [(i.e., the inventor)] controls” in an obviousness analysis. *KSR*, 550 U.S. at 419.

Regarding Appellants’ non-analogous art contentions on the DeHart and Issa references (App. Br. 18, 23), we are not persuaded by these arguments and we adopt the Examiner’s findings. (Ans. 22, 26–27). Our reviewing court guides: “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. Co.*, 810 F.2d 1561, 1568 n.9 (Fed. Cir. 1987)). Two criteria have evolved for answering the question: “(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.* at 659 (citations omitted).

Here, we agree with the Examiner’s finding that the DeHart and Issa references are reasonably pertinent to the subject problem because “DeHart, [and] Issa . . . are in the field of sensor communication over a supply line between sensors and a controller,” thus rendering the present invention, and yielding predictable results. (Ans. 27).

The Supreme Court also guides: “a combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 401. We also find an

artisan would have relied on common sense in modifying “DeHart's detection to include Takezoe's average voltage detection to prevent an error from incidental minor voltage dips.” (Final Act. 4), and to further modify DeHart’s communication signal to include Issa’s pulse width identification system (Final Act. 5). Thus, we find the Examiner's proffered modification is a mere substitution of known elements that would have yielded a predictable result. *See KSR*, 550 U.S. at 417.

Therefore, on this record, and by the preponderance of evidence, we are not persuaded of error regarding the Examiner's underlying factual findings and ultimate legal conclusion of obviousness. Accordingly, we sustain the Examiner's § 103(a) rejection of representative independent claim 1 and claims 2, 4–7, 9–13, and 15–19, not separately argued and rejected on the same basis as claim 1.

Appellants advance no substantive, separate arguments regarding the Examiner's second-stated rejection of claim 14. Arguments not made are considered waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Accordingly, we also affirm the rejection of claim 14 under § 103(a).

V. CONCLUSION AND DECISION

We affirm the Examiner’s rejections of claims 1, 2, 4–7, and 9–19 under § 103(a).

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).

AFFIRMED