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EXAMINER
NOVAK, PETER MICHAEL

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JIWEI FAN and MINGYUE ZHAO

Appeal 2019–007008
Application 15/816,446
Technology Center 2800

BEFORE CATHERINE Q. TIMM, BEVERLY A. FRANKLIN, and JANE E. INGLESE *Administrative Patent Judges.*

FRANKLIN, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–3. Claims 4–8 are objected to as indicated on page 5 of the Final Office Action. 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(a). Appellant identifies the real party in interest as Texas Instruments Incorporated. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Claim 1 is illustrative of Appellant's subject matter on appeal and is set forth below:

1. A circuit comprising:

an input terminal;

an output terminal;

a fixed frequency clock circuit configured to generate a clock signal having fixed frequency clock pulses;

a driver circuit configured to operate a switch, coupled to a switch node between the input and output terminal, in response to pulse width modulation (PWM) pulses; and

a pulse generation circuit coupled to receive a feedback voltage associated with the output terminal, the pulse generation circuit including:

a transient sensing circuit having:

an amplifier configured to amplify a difference between a reference voltage and the feedback voltage;

a high pass filter having a filter input coupled to receive the amplified difference, and a filter output; and

a sense output configured to deliver a sense signal corresponding

to the filter output; and

a clock augmentation circuit coupled to the transient sensing circuit, and configured to generate an augmented clock signal for triggering the PWM pulses, wherein the augmented clock signal including the clock signal and an additional clock pulse in response to the sense signal.

REFERENCES

The prior art relied upon by the Examiner are:

Name	Reference	Date
Hartman	US 8,330,437 B1	Dec. 11, 2012
Zhang et al.	US 2016/0248328 A1	Aug. 25, 2016

THE REJECTION

Claims 1–3 are rejected under 35 U.S.C. § 103 as being unpatentable over Hartman in view of Zhang.

OPINION

We review the appealed rejection for error based upon the issues Appellant identifies, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) (cited with approval in *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) ("[I]t has long been the Board's practice to require an applicant to identify the alleged error in the examiner's rejections."). After considering the argued claims and each of Appellant's arguments, and the Examiner's position in the record as reflected in the Final Office Action and the Appeal Brief[2], we are persuaded of reversible error in the appealed rejection. Accordingly, we reverse the Examiner's rejection on appeal essentially for the reasons set forth in the record by Appellant, and add the following for emphasis.

We refer to the Examiner's statement of the rejection as set forth on pages 3–5 of the Final Office Action.

[2] We use the Appeal Brief filed on May 10, 2019.

In response thereto, Appellant argues, *inter alia*, that the Examiner's proposed modification of the primary reference of Hartman to replace the transient detector 128 of Hartman with the circuit in Figure 6 of Zhang would render Hartman unsatisfactory for its intended purpose. Appeal Br. 4. Appellant explains that Hartman specifically teaches the criticality of the transient detector 128 at column 4, lines 4–21. Appeal Br. 3. Appellant states that therein Hartman teaches that the transient detector 128 enables the PWM modulator 116 to respond to rapid change in output voltage. Appellant Br. 3–4. Appellant submits that by contrast, the circuit in Figure 6 of Zhang does not provide rapid response to any rapid change in output voltage. Appeal Br. 4. Appellant explains that unlike the comparator 132 in the transient detector 128 of Hartman, the amplifier 620a of Zhang is not configured to detect rapid transient events at the output node. *Id.*

The Examiner's response is set forth on pages 5–8 of the Answer. Notably, the Examiner does not dispute Appellant's position that Hartman teaches that the transient detector 128 is critical for enabling the PWM modulator 116 to respond to rapid change in output voltage, and does not address specifically Appellant's statement that the circuit in Figure 6 of Zhang does not provide rapid response to any rapid change in output voltage. Rather, on page 8 of the Answer, the Examiner states that the system of Zhang was meant for transients and refers to claim 1 of Zhang in support thereof. However, this insufficiently resolves the issue raised by Appellant that the circuit in Figure 6 of Zhang does not provide rapid response to any rapid change in output voltage. As Appellant states on page 4 of the Reply Brief, the Examiner's referral to Zhang's claim 1 does not explain how the circuit of Zhang could be integrated in a way that preserves

the functionality of Hartman. Reply Br. 4. As such, we determine that the preponderance of evidence supports Appellant's position in the record, and reverse the rejection. We note that "[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." *In re Ratti*, 270 F.2d 810, 813 (CCPA 1959).

CONCLUSION

We reverse the Examiner's decision.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Reversed	Affirmed
1–3	103	Hartman, Zhang	1–3	

REVERSED