

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MARVELL SEMICONDUCTOR, INC.,
Petitioner,

v.

INTELLECTUAL VENTURES I LLC,
Patent Owner.

Case IPR2014-00548
Patent 5,712,870

Before THOMAS L. GIANNETTI, JAMES A. TARTAL, and
PATRICK M. BOUCHER, *Administrative Patent Judges*.

TARTAL, *Administrative Patent Judge*.

DECISION

Request for Rehearing
37 C.F.R. § 42.71(d)

INTRODUCTION

Petitioner, Marvell Semiconductor, Inc., filed a corrected Petition requesting an *inter partes* review of claims 1–20 of U.S. Patent No. 5,712,870 (“the ’870 patent”). Paper 6 (“Pet.”). In our Decision dated December 3, 2014 (Paper 16, “Dec.”), we instituted *inter partes* review of claims 1, 2, 4–6, 8–11, and 13–20 of the ’870 patent. Dec., 23. Petitioner requests rehearing (Paper 19, “Req. Reh’g.”) of our decision not to institute *inter partes* review of claims 3 and 12 of the ’870 patent. Req. Reh’g. 1. For the reasons that follow, Petitioner’s request for rehearing is denied.

The applicable standard for a request for rehearing is set forth in 37 C.F.R. § 42.71(d), which provides in relevant part:

A party dissatisfied with a decision may file a request for rehearing, without prior authorization from the Board. The burden of showing a decision should be modified lies with the party challenging the decision. The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, opposition, or a reply.

ANALYSIS

Petitioner contends in its Petition that claims 3 and 12 of the ’870 patent are unpatentable as obvious over Fischer,¹ Nakamura,² and Rhodes.³ Pet. 31–43.

¹ U.S. Patent No. 5,371,734, issued Dec. 6, 1994 (Ex. 1004, “Fischer”)

² U.S. Patent No. 4,856,027, issued Aug. 8, 1989 (Ex. 1005, “Nakamura”)

³ U.S. Patent No. 4,313,205, issued Jan. 26, 1982 (Ex. 1006, “Rhodes”)

Claim 3 depends from claim 2, which in turn depends from claim 1.

Claims 1–3 are reproduced below.

1. A circuit for detecting a message header in a signal which has been transmitted using direct sequence spread spectrum modulation, comprising a single device having:

means for receiving an analog signal having modulated

thereon in a spread spectrum format a message having a header portion and a data portion;

means for converting said analog signal into a digital signal;

means for demodulating the header of the digital signal

using digital binary phase shift keyed (BPSK)

demodulation and for demodulating the data portion of

the same message using quarter[n]ary phase shift keyed demodulation (QPSK);

means contained on said single device for timing a transition

from BPSK modulation to QPSK modulation; and,

means for providing the demodulated data signal to a media access control (MAC) layer.

2. The circuit of claim 1 further comprising means for adjusting said means for timing to account for headers of variable length.

3. The circuit of claim 2 wherein said means for adjusting is contained within said single device and wherein said means for adjusting is responsive to a data field within said message header.

Claim 12 depends from claim 11, which in turn depends from claim

10. Claims 10–12 are reproduced below.

10. In a communication system capable of receiving RF direct sequence spread spectrum signals, said system having a message header detection circuit comprising a single device having:

an analog receiver for receiving a spread spectrum modulated signal having a header portion and a data portion;
an analog-to-digital converter operable on said modulated signal;
a digital demodulator for binary phase shift keyed (BPSK) demodulation of said header portion and quaternary phase shift keyed (QPSK) demodulation of said data portion;
a timer for transitioning between the BPSK demodulation and the QPSK demodulation; and,
an interface for providing the demodulated data signal to a media access control (MAC) layer.

11. The circuit of claim 10 wherein said timer is adjustable to account for headers of variable length.

12. The circuit of claim 11 wherein the adjustability of said timer is based on information contained within a data field of said header portion.

Petitioner first argues that dependent claims 3 and 12 “do not recite ‘to account for headers of variable length,’ and further states “that phrase is from earlier claims 2 and 11.” Req. Reh’g., 3. Petitioner’s assertion is without merit as 35 U.S.C. § 112 makes clear that “[a] claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.” Thus, it is of no moment whether the limitation is recited in the dependent claim, or instead appears in the claim from which the independent claim depends. Each of the limitations of claims 1 and 2 are required by claim 3, and, likewise, each of the limitations of claims 10 and 11 are required by claim 12.

Petitioner next argues that because it relies on Rhodes as disclosing the additional limitations of claims 3 and 12, and “relies on other art for the earlier claims’ requirement of accounting for headers of variable length,” we misapprehended “Petitioner’s use of Rhodes.” Req. Reh’g. 3–4. As we explained in the Decision:

Claims 3 and 12 each relate to adjusting the timing of the transition from BPSK to QPSK to account for headers of variable length based on a data field in the header. According to Petitioner, Fischer discloses adjusting the timing of the transition from BPSK to QPSK to account for headers of variable length (Pet. 23–24) and Rhodes “discloses circuitry that adjusts timing based on detecting a unique word (data field) within a preamble (message header) of a message.” Pet. 33.

Petitioner relies on conclusory statements that the combination of the asserted references would be motivated to provide improved reliability, but does not articulate persuasively how the teachings of each reference are to be combined to satisfy the limitations of claims 3 and 12. In particular, it is unclear how the disclosure in Rhodes quoted by Petitioner concerning data fields in the header corresponds to timing adjustments to account for headers of variable length, as claimed. *See id.*

Dec. 19–20.

It is not sufficient for Petitioner merely to show that Rhodes only discloses the features added by claims 3 and 12, because claims 3 and 12 further require the features of the claims from which they depend. *See Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999) (“proper claim construction ... demands interpretation of the

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