Opposition To Petition For *Inter Partes* Review Of Patent 8,023,580

Case Nos.

IPR2014-00518
IPR2014-00519

April 24, 2015

Rembrandt Wireless Technologies, LP

Pepper Hamilton LLP
Attorneys at Law

Dr. Koopman, for Patent Owner

86. As such, Petitioner's reliance on the Upender/Koopman article is misplaced and misleading. The Upender/Koopman article highlights the tradeoffs of various protocols. The article in no way suggests that one of skill in the art would take a system implementing a CSMA/CA protocol, such as the protocol employed in Boer, and simply recast it as a master/slave communication system for the sake of simplicity and determinacy. Rather, a practitioner of ordinary skill would understand that such a change of protocols would adversely affect some aspects of performance, such as reducing efficiency and flexibility – most likely two of the main reasons a CSMA/CA protocol was chosen by Boer in the first place. These disadvantages would outweigh the potential benefits derived from the simplicity and determinacy of a polling protocol.

Koopman Decl.
(518/Ex. 2208 at ¶86; 519/Ex. 2302 at ¶86).

Dr. Goodman, for Petitioner

10 Q. Did you read the entire Upender
11 article?
12 A. I don't recall reading it from
13 beginning to end. I have looked at various
14 parts of it.

Goodman Deposition Transcript
518/Ex. 2211 at 97:10-14
519/Ex. 2308 at 97:10-14

15 Q. Do you have an understanding as to
16 why Upender reaches the conclusion that the
17 CSMA/CA is the most, the best protocol?
18 MR. MILLER: Objection; foundation.
19 A. I don't -- no, I didn't read it
20 carefully enough to find out why. I don't
21 know. I can't say why.

Goodman Deposition Transcript
518/Ex. 2211 at 98:15-21
519/Ex. 2308 at 98:15-21

US008023580B2

(12) **United States Patent**
Bremer

(10) **Patent No.: US 8,023,580 B2**
(45) **Date of Patent: Sep. 20, 2011**

(54) **SYSTEM AND METHOD OF COMMUNICATION USING AT LEAST TWO MODULATION METHODS**

(76) Inventor: **Gordon E. Bremer**, Clearwater, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **12/543,910**

(22) Filed: **Aug. 19, 2009**

(65) **Prior Publication Data**

US 2010/0183055 A1 Jul. 22, 2010

Related U.S. Application Data

(63) Continuation of application No. 11/774,803, filed on Jul. 9, 2007, now Pat. No. 7,675,965, which is a continuation of application No. 10/412,878, filed on Apr. 14, 2003, now Pat. No. 7,248,626, which is a continuation-in-part of application No. 09/205,205, filed on Dec. 4, 1998, now Pat. No. 6,614,838.

(60) Provisional application No. 60/067,562, filed on Dec. 5, 1997.

(51) **Int. Cl.**
H04L 5/12 (2006.01)

(52) **U.S. Cl.** **375/261**; 455/102; 332/108; 332/119; 332/151

(58) **Field of Classification Search** 375/261, 375/269, 285, 222, 298, 302, 305, 308; 455/102, 455/110; 332/108, 119, 120, 151
See application file for complete search history.

(56) **References Cited**

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3,761,840	A	9/1973	Bremer
3,970,926	A	7/1976	Rigby et al.
4,091,422	A	5/1978	Amster
4,335,464	A	6/1982	Armstrong et al.
4,381,546	A	4/1983	Armstrong
4,464,767	A	8/1984	Bremer
4,503,545	A	3/1985	Bremer et al.
4,509,171	A	4/1985	Bremer et al.
4,516,216	A	5/1985	Armstrong
4,525,846	A	6/1985	Bremer et al.
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4,532,640	A	7/1985	Bremer et al.
4,630,286	A	12/1986	Betts
4,645,871	A	2/1987	Bremer et al.
4,654,807	A	3/1987	Bremer
4,663,766	A	5/1987	Bremer
4,677,625	A	6/1987	Betts et al.
4,782,498	A	11/1988	Copeland, III

(Continued)

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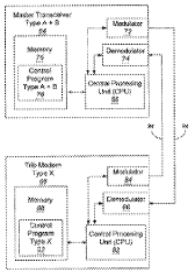
(Continued)

Primary Examiner — Dac Ha
(74) *Attorney, Agent, or Firm* — Condo Roccia LLP

(57) **ABSTRACT**

A device may be capable of communicating using at least two type types of modulation methods. The device may include a transceiver capable of acting as a master according to a master/slave relationship in which communication from a slave to a master occurs in response to communication from the master to the slave. The master transceiver may send transmissions discrete transmissions structured with a first portion and a payload portion. Information in the first portion may be modulated according to a first modulation method and indicate an impending change to a second modulation method, which is used for transmitting the payload portion. The discrete transmissions may be addressed for an intended destination of the payload portion.

79 Claims, 8 Drawing Sheets



- U.S. Patent No. 8,023,580
- Gordon E. Bremer
- Filed: August 19, 2009
- Priority Date: December 7, 1997

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(57) **ABSTRACT**

A device may be capable of communicating using at least two type types of modulation methods. The device may include a transceiver capable of acting as a master according to a master/slave relationship in which communication from a slave to a master occurs in response to communication from the master to the slave. The master transceiver may send transmissions discrete transmissions structured with a first portion and a payload portion. Information in the first portion may be modulated according to a first modulation method and indicate an impending change to a second modulation method, which is used for transmitting the payload portion. The discrete transmissions may be addressed for an intended destination of the payload portion.

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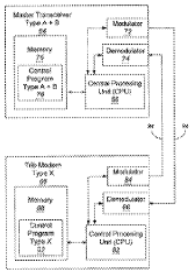

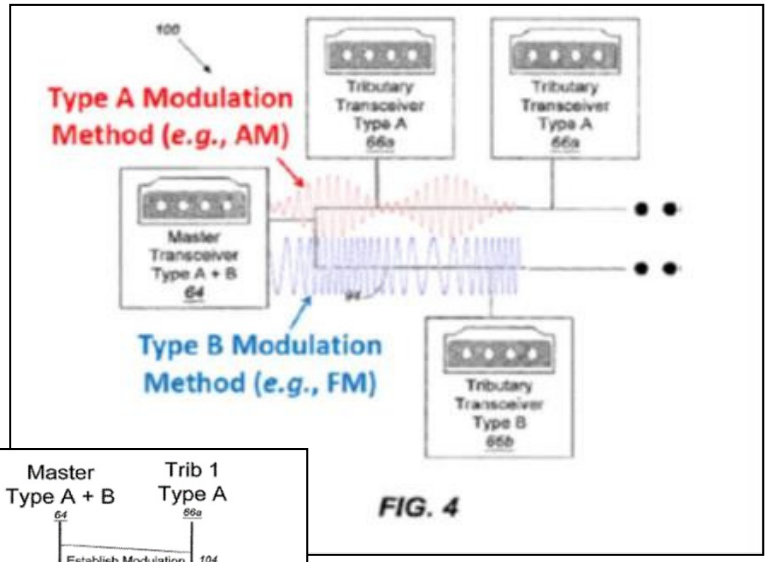

FIG. 4

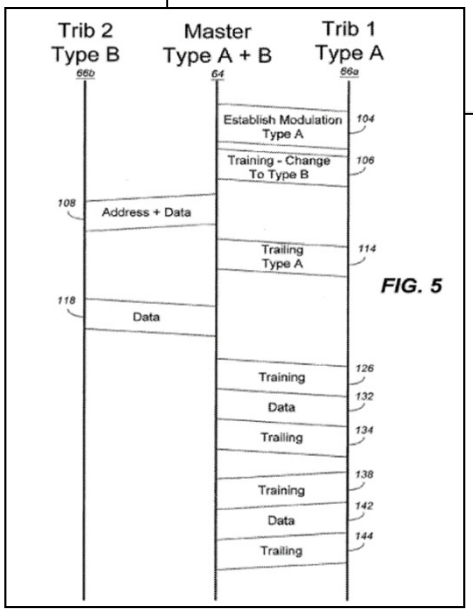

FIG. 5

- Claim 1

A communication device capable of communicating according to a ***master/slave relationship*** in which a slave communication from a slave to a master occurs in response to a master communication from the master to the slave, the device comprising:

a transceiver, in the role of the master according to the master/slave relationship, for sending at least transmissions modulated using ***at least two types of modulation methods***, wherein the at least two types of modulation methods comprise a first modulation method and a second modulation method, ***wherein the second modulation method is of a different type than the first modulation method***, wherein each transmission comprises a group of transmission sequences, wherein each group of transmission sequences is structured with at least a first portion and a payload portion wherein first information in the first portion indicates at least which of the first modulation method and the second modulation method is used for modulating second information in the payload portion, wherein at least one group of transmission sequences is addressed for an intended destination of the payload portion, and wherein for the at least one group of transmission sequences:

the first information for said at least one group of transmission sequences comprises a first sequence, in the first portion and modulated according to the first modulation method, wherein the first sequence indicates an impending change from the first modulation method to the second modulation method, and

the second information for said at least one group of transmission sequences comprises a second sequence that is modulated according to the second modulation method, wherein the second sequence is transmitted after the first sequence.

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