

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SAMSUNG ELECTRONICS CO. LTD., SAMSUNG ELECTRONICS  
AMERICA, INC., SAMSUNG TELECOMMUNICATIONS AMERICA,  
LLC, and SAMSUNG AUSTIN SEMICONDUCTOR, LLC,  
Petitioner,

v.

REMBRANDT WIRELESS TECHNOLOGIES, LP,  
Patent Owner.

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Case IPR2014-00518  
Patent 8,023,580 B2

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Before JAMESON LEE, HOWARD B. BLANKENSHIP, and  
JUSTIN BUSCH, *Administrative Patent Judges*.

BLANKENSHIP, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
*35 U.S.C. § 318(a) and 37 C.F.R. § 42.73*

## I. BACKGROUND

Samsung Electronics Co. Ltd., Samsung Electronics America, Inc., Samsung Telecommunications America, LLC, and Samsung Austin Semiconductor, LLC (collectively, “Petitioner”) filed a request for *inter partes* review of claims 1, 2, 4, 5, 10, 13, 19–22, 49, 52–54, 57–59, 61, 62, 66, 70, and 76–79 of U.S. Patent No. 8,023,580 B2 (“the ’580 patent,” Ex. 1201) under 35 U.S.C. §§ 311–319. Paper 4 (“Petition” or “Pet.”) The Board instituted an *inter partes* review of claims 1, 4, 5, 10, 13, 20–22, 54, 57, 58, 61, 62, 66, 70, and 76–79 on an asserted ground of unpatentability for obviousness. Paper 16 (“Dec. on Inst.”).

Subsequent to institution, Patent Owner Rembrandt Wireless Technologies, LP, filed a patent owner response (Paper 25, “PO Resp.”). Petitioner filed a reply to the Patent Owner Response (Paper 32, “Pet. Reply”).

Oral hearing was held on April 24, 2015.<sup>1</sup>

The Board has jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1, 4, 5, 10, 13, 20–22, 54, 57, 58, 61, 62, 66, 70, and 76–79 of the ’580 patent are unpatentable.

### A. *Related Proceedings*

According to Petitioner, the ’580 patent is involved in the following lawsuit: *Rembrandt Wireless Technologies, LP v. Samsung Electronics Co.*, No. 2:13-cv-00213 (E.D. Tex. 2013). Pet. 2. The ’580 patent also has been

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<sup>1</sup> The record includes a transcript of the oral hearing. Paper 46 (“Tr.”).

IPR2014-00518  
Patent 8,023,580 B2

challenged in the following cases: *Samsung Electronics Co. v. Rembrandt Wireless Technologies, LP*, IPR2014-00514 (not instituted); *Samsung Electronics Co. v. Rembrandt Wireless Technologies, LP*, IPR2014-00515 (not instituted); and *Samsung Electronics Co. v. Rembrandt Wireless Technologies, LP*, IPR2014-00519 (final decision issuing concurrently).

### *B. The '580 Patent*

The '580 patent issued from an application filed August 19, 2009, which claimed priority under 35 U.S.C. § 120 through a chain of intervening applications to an application filed December 4, 1998, and which further claimed priority under 35 U.S.C. § 119 to a provisional application filed December 5, 1997.

The technical field of the patent relates to data communications and modulators/demodulators (modems) and in particular to a data communications system in which a plurality of modems uses different types of modulation in a network. Ex. 1201, col. 1, ll. 19–23; col. 1, l. 56 – col. 2, l. 20.

### *C. Illustrative 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.

*D. Prior Art*

Boer            US 5,706,428            Jan. 6, 1998            (Ex. 1204)

*E. Asserted Ground of Unpatentability*

The Board instituted *inter partes* review on the following asserted ground of unpatentability under 35 U.S.C. § 103(a) (Dec. on Inst. 17): claims 1, 4, 5, 10, 13, 20–22, 54, 57, 58, 61, 62, 66, 70, and 76–79 of the ’580 patent on the ground of obviousness over Admitted Prior Art (“APA”) and Boer.

## II. ANALYSIS

### A. Claim Interpretation

In an *inter partes* review, the Board construes claim terms in an unexpired patent using their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1275–79 (Fed. Cir. 2015). The claim language should be read 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). The Office must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification. *Id.* (citing *In re Bass*, 314 F.3d 575, 577 (Fed. Cir. 2002)). The “ordinary and customary meaning” is that which the term would have to a person of ordinary skill in the art in question. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

#### 1. Modulation Methods

Illustrative claim 1 recites a transceiver capable of transmitting 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 . . . .”

Petitioner submits that the ordinary meaning of “modulation” is “[t]he process by which some characteristic of a carrier is varied in accordance with a modulating wave.” Pet. 11 (quoting Ex. 1206, 3 (technical dictionary)). Patent Owner submits that “modulation method” is

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