

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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.

Case IPR2014-00519
Patent 8,023,580 B2

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

BUSCH, *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 23, 25, 29, 30, 32, 34, 38, 40, 41, 43, 44, and 47 of U.S. Patent No. 8,023,580 B2 (“the ’580 patent,” Ex. 1301) under 35 U.S.C. §§ 311–319. The Board instituted an *inter partes* review of claims 32, 34, 38, 40, 43, 44, and 47. Paper 16 (“Dec. on Inst.”).

Subsequent to institution, Patent Owner Rembrandt Wireless Technologies, LP, filed a Notice of Filing a Disclaimer (Paper 26), indicating that Patent Owner filed a disclaimer under 35 U.S.C. § 1.321(a) disclaiming claims 32, 34, 40, 43, and 44. Therefore, the trial is terminated with respect to claims 32, 34, 40, 43, and 44. *See* 37 C.F.R. §§ 42.72, 42.73. Patent Owner also filed a patent owner response (Paper 25, “PO Resp.”). Petitioner filed a reply to the Patent Owner Response (Paper 34, “Pet. Reply”).

Oral hearing was held on April 24, 2015.¹

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 38 and 47 of the ’580 patent are unpatentable.

¹ The record includes a transcript of the oral hearing. Paper 48.

A. Related Proceedings

According to Petitioner, the '580 patent is involved in the following district court proceeding: *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 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*, IPR2014-00518 (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. 1301, 1:19–23, 1:56–2:20.

C. Illustrative Claim

Illustrative claim 38 and claim 32, from which claim 38 depends, are reproduced below:

32. A communications device, comprising:

a processor; and

a memory having stored therein executable instructions for execution by the processor, wherein the executable instructions direct transmission of a first data with a first modulation method followed by a second data with a second modulation method, wherein the first modulation method is different than the second modulation method, wherein the first data comprises an indication of an impending change from the first modulation method to the second modulation method wherein the executable instructions direct transmission of a third data with the first modulation method after the second data, and wherein transmission of the second data is according to a particular quantity of data.

38. The device of claim 32, wherein the memory has stored therein program code for a multipoint communications protocol.

D. Prior Art

Boer	US 5,706,428	Jan. 6, 1998	(Ex. 1304)
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E. Asserted Ground of Unpatentability

The Board instituted *inter partes* review on the asserted grounds that claims 32, 34, 40, 43, and 44 of the '580 patent are unpatentable as anticipated by Boer and claims 38 and 47 are unpatentable as obvious over Admitted Prior Art ("APA") and Boer. Dec. on Inst. 16. Patent Owner's

disclaimer, discussed above, leaves the anticipation ground as the only ground at issue in this proceeding.

II. ANALYSIS

A. Prior Art

1. Admitted Prior Art

Petitioner contends that the '580 patent's disclosed multipoint communication systems (or master/slave systems), depicted in Figures 1 and 2 and described in column 3, line 40 through column 4, line 50, constitutes material that may be used as prior art against the patent under 35 U.S.C. § 103(a). We agree. Figure 1 of the patent is labeled as "Prior Art." Pet. 6; Ex. 1301, Fig. 1. Further, the '580 patent's specification refers to "prior art" multipoint communication system 22 comprising master modem or transceiver 24, which communicates with a plurality of tributary modems ("tribs") or transceivers 26. Pet. 6; Ex. 1301, 3:40–44. Further, the '580 patent describes Figure 2 as illustrating the operation of the multipoint communication system of (prior art) Figure 1. Pet. 7; Ex. 1301, 3:9–10.

2. Boer

Boer describes a wireless LAN that includes first stations that operate at 1 or 2 Mbps (Megabits per second) data rate and second stations that operate at 1, 2, 5, or 8 Mbps data rate. Ex. 1304, Abstract.

Figure 1 of Boer is reproduced below.

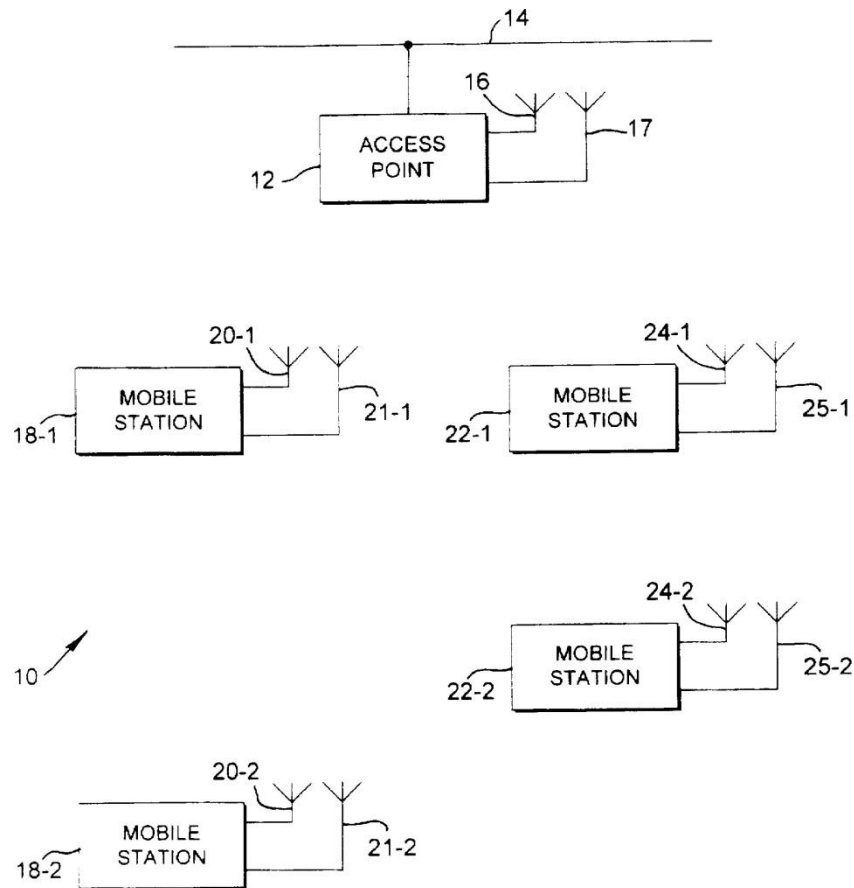


FIG.1

Figure 1 is said to be a block diagram of a wireless LAN embodying Boer's invention. Ex. 1304, 1:53–54. LAN 10 includes access point 12, serving as a base station. The network includes mobile stations 18-1 and 18-2 that are capable of transmitting and receiving messages at a data rate of 1 or 2 Mbps using DSSS (direct sequence spread spectrum) coding. When operating at 1 Mbps, a station uses DBPSK (differential binary phase shift keying) modulation. When operating at 2 Mbps, a station uses DQPSK (differential quadrature phase shift keying) modulation. *Id.* at 2:6–27.

Mobile stations 22-1 and 22-2 are capable of operating at the 1 and 2 Mbps data rates using the same modulation and coding as stations 181 and 182. In addition, stations 22-1 and 22-2 can operate at 5 and 8 Mbps data rates using PPM/DQPSK (pulse position modulation–differential quadrature phase shift keying) in combination with the DSSS coding. *Id.* at 2:34–44.

B. Claims 38 and 47 – APA and Boer

1. Asserted Ground

Petitioner applies the teachings of the APA and Boer to demonstrate obviousness of the subject matter of illustrative claim 29 (which recites the similar limitation present in claims 38 and 47 of a multipoint communications protocol), relying on APA for teaching of master/slave communication systems. Pet. 37–43. Petitioner submits that a person having ordinary skill in the art would have been motivated to combine Boer with APA, referring to the Declaration of Dr. David Goodman (Ex. 1318 ¶¶ 162–170). *Id.* at 38–41. Petitioner maps the disclosures of Boer to claim 32 (*id.* at 25–26) from which claim 38 depends and claims 40 (*id.* at 31–35) and 44 (*id.* at 37), from which claim 47 depends.

Dr. Goodman testifies that polled multipoint master/slave communications systems were well known to those of ordinary skill in the art for simplicity and determinacy, referring to Exhibit 1317. Ex. 1318 ¶ 169. Petitioner submits Exhibit 1317 (“Upender”) as a November 1994 publication that compares various strengths and weaknesses for communication protocols for embedded systems. Ex. 1317, 7. The document states that polling is one of the more popular protocols for embedded systems “because of its simplicity and determinacy.” *Id.* In that

protocol, a centrally assigned master periodically sends a polling message to the slave nodes, giving them explicit permission to transmit on the network. *Id.* The protocol “is ideal for a centralized data-acquisition system where peer-to-peer communication and global prioritization are not required.” *Id.*

2. Motivation to Combine

Patent Owner argues, in its Response, that Upender does not reflect a proper motivation from the prior art for the proffered combination of Boer and APA. Patent Owner submits a Declaration from a co-author of Upender to show that the article did not suggest the use of a master/slave communication system. Ex. 2302 (Declaration of Dr. Philip Koopman).

We have considered Patent Owner’s arguments and evidence but find that the clear teachings in Upender are not diminished or rebutted. Upender investigates tradeoffs in different communication protocols. The article concludes that CSMA/CA (carrier sense multiple access with collision avoidance), or RCSMA (reservation CSMA), is a good choice for some embedded systems. Ex. 1317, 10–11. The article also indicates that polling may not provide sufficient flexibility for “advanced systems,” classifying polling as “simple,” but noting that the discussion of the different protocol strengths and weaknesses “should allow you to select the best protocol to match your needs.” *Id.* at 10–11. In fact, Dr. Koopman admits that there are some systems for which master/slave is a better match for the design requirements. Pet. Reply 9; Ex. 1319, 39:2–20.

That Upender may identify some advantages of CSMA/CA over a master/slave protocol is not a “teaching away” from the master/slave protocol. Upender teaches that master/slave protocols were widely used and

a good choice for simple systems. *See In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (“[A] person seeking to improve the art of flexible circuit boards, on learning from [a reference] that epoxy was inferior to polyester-imide resins, might well be led to search beyond epoxy for improved products. However, [the reference] also teaches that epoxy is usable and has been used for Gurley’s purpose.”).

Patent Owner’s position appears to be that the prior art teaches that one and only one communication protocol should ever be used, which is directly contrary to the clear teachings of Upender. In view of Upender, one of ordinary skill in the art would have found it obvious to use a different prior art communication protocol (e.g., a simpler protocol) when using multiple data rates as described by Boer.

Further, we agree with Petitioner that Boer does not describe CSMA as central to an alleged goal of seeking a “reduction of overhead-in-time per transmission,” but relates that reduction to the use of short acknowledgment (ACK) messages. PO Resp. 40; Pet. Reply 8; Ex. 1304, 8:16–29.

Patent Owner submits that Dr. Goodman’s Declaration (Ex. 1318) is unreliable because it is unclear what level of skill it attributes to the ordinary artisan. PO Resp. 29–30. The alleged lack of clarity, however, does not affect the outcome. We note that specifying the level of ordinary skill in terms of an academic degree in a field of study and the number of years of practical working experience is generally unhelpful, as a practical matter, because it does not convey whether one with ordinary skill in the art would have been aware of anything specific or particular. Patent Owner has not directed us to evidence establishing what someone who has earned a certain degree or who has a certain number of years of experience necessarily

knows. It is not always necessary, however, to have an express proposition on the level of ordinary skill in the art. The level of ordinary skill in the art may be reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

We agree with Patent Owner to the extent that one of skill in the art would not consider using a CSMA/CA protocol in a master/slave configuration. PO Resp. 21. That combination, however, is not contemplated by the asserted ground of unpatentability. As Patent Owner and Dr. Koopman recognize, the transmitted data used in Boer to effect the CSMCA/CA protocol would be “totally unnecessary” in a master/slave configuration. *Id.*; Ex. 2302 ¶ 96.

3. APA and Boer — Conclusion

Upon review of the Petition and supporting evidence, as well as the Patent Owner Response and supporting evidence, we conclude that Petitioner has demonstrated, by a preponderance of the evidence, that claims 38 and 47 are unpatentable for obviousness over APA and Boer.

III. CONCLUSION

Petitioner has demonstrated by a preponderance of the evidence that claims 38 and 47 are unpatentable for obviousness over APA and Boer.

IV. ORDER

In consideration of the foregoing, it is

ORDERED that the trial is terminated with respect to claims 32, 34, 40, 43, and 44;

FURTHER ORDERED that claims 38 and 47 of the '580 patent are *unpatentable*; and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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