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marianne.fox@philips.com
patti.demichele@Philips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GUIDO HIERTZ, RAJESH SHANTARAM BAGUL,
OLAF WISCHHUSEN, JORG HABETHA, and KLAUS MAY

Appeal 2018-002986
Application 10/561,457¹
Technology Center 2600

Before MAHSHID D. SAADAT, ERIC S. FRAHM, and
BARBARA A. PARVIS, *Administrative Patent Judges*.

FRAHM, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The instant application on appeal was the subject of a prior appeal, Appeal No. 2011-000016, decided June 11, 2013. In the prior appeal, the Board affirmed the Examiner's obviousness rejection of claims 1–25 under 35 U.S.C. § 103(a) over the base combination of Whitehill et al. (US 6,404,756 B1; issued June 11, 2002) (hereinafter, "Whitehill"), Giles et al. (US 5,231,634; issued July 27, 1993) (hereinafter, "Giles"), and He (US 5,734,898; issued March 31, 1998) (*see* Decision 3, 7; *see also* Decision 3, fn. 2).

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner’s decision to reject claims 1, 5–13, 16, 17, 19–21, and 24–27. Claims 14, 15, 22, and 23 have been objected to by the Examiner as being dependent on rejected base claims, but allowable if rewritten in independent form to include all of the limitations of the base claims and any intervening claims (Final Act. 19).³ Claims 2–4 and 18 were canceled after the Final Rejection in an after final amendment entered by the Examiner in the Advisory Action mailed May 26, 2017 (*see* p. 1, box 7b; *see also* Appeal Br. 33, 37 (Claims Appendix)). We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Disclosed Invention and Exemplary Claim

Appellant’s disclosed invention relates to wireless local area networks (WLANs) for the home user market that are based on Institute of Electronics and Electrical Engineering (IEEE) 802.11, and which do not offer infrastructure for the network, and thus have a need for decentralized quality

² We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. “The word ‘applicant’ when used in this title refers to the inventor or all of the joint inventors, or to the person applying for a patent as provided in §§ 1.43, 1.45, or 1.46.” 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Philips Lighting Holding B.V. (Appeal Br. 3).

³ Dependent claims 14, 15, 22, and 23 each recite, in addition to the transmission of one or more reservation requests recited in independent claims 1, 17, and 25, the additional limitation of “transmitting . . . a revocation message . . . for the purpose of deleting one or several reservation requests” (*see, e.g.*, claim 14).

of service (QoS) support (Spec. 1:10–15). Because data traffic in decentralized WLANs under IEEE 802.11 suffers from the possibility of collisions that reduce throughput, generate overhead, and increase delay (*see* Spec. 1:16–22), Appellant’s disclose and claim a method of decentralized medium access control in a communications network (*see* claim 1) that “overcome[s] the disadvantages of the standard 802.11 collision avoidances” (Spec. 1:30–31), and “reserve[s] the wireless medium to the needs of Quality of Service applications” (Spec. 2:1–2). Exemplary independent claim 1 under appeal, with emphases and bracketed lettering added to key portions of the claim at issue, reads as follows:

1. A method of decentralized medium access control in a communications network consisting of a plurality of stations, wherein a sending station transmits a reservation request for a future transmission to an intended receiving station, the intended receiving station being in a reception range for transmissions of the sending station, the method comprising:

operating under a protocol by the plurality of stations, wherein the protocol provides that a reservation for the future transmission is established when the reservation request is transmitted;

[A] *transmitting*, by the sending station, *the reservation request piggy-back in a normal data frame*, the reservation request including a starting point and a duration of the future transmission to define a time period of the future transmission;

when the plurality of stations belong to a multi-channel system, including, by the sending station, a frequency or code of the channel of the future transmission in the reservation information;

overhearing the reservation request by stations active in the reception range for transmissions of the sending station;

storing, by stations other than the intended receiving station, the reservation information of the already established reservation locally based on the reservation request;

deferring, by the stations other than the intended receiving station, from medium access during the time period and on the channel of the future transmission; and

[B] *including, by the sending station, the reservation request in a frame body or frame header of a data frame.*

Appeal Br. 33, Claims Appendix (emphases and bracketed lettering added). Remaining independent claims 17 and 25 recite a communications and a station (claim 25) having limitations commensurate in scope with limitations A and B of method claim 1. Limitations A and B in claim 1 above were added by amendment during prosecution after the prior appeal of this application, decided by the Board on June 11, 2013 (affirmed for obviousness over Whitehill, Giles, and He). As discussed below, the issue presented regarding limitations A and B and the motivation to combine the applied references will be dispositive of the instant application on appeal.

The Examiner's Rejections

Claims 1, 5–13, 16, 17, 19–21, and 24–27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the base combination of Whitehill, Giles, and Cao et al. (US 6,850,504 B1; issued Feb. 1, 2005) (hereinafter, “Cao”). Final Act. 3–18.

Appellant's Contentions

Appellant primarily contends that the Examiner erred in rejecting claims 1, 5–13, 16, 17, 19–21, and 24–27 under 35 U.S.C. § 103(a) based on a lack of motivation to combine the applied references, as evidenced by (i) Whitehill teaching away from the recited invention; (ii) the Examiner's use of impermissible hindsight; and (iii) the Examiner's failure to articulate a

reason to modify Whitehill's reservation method, which uses a separate reservation channel, with Cao's piggy-backing in a data frame in the same channel (*see* Appeal Br. 9–12, 21–28; Reply Br. 2–6). More particularly, Appellant argues that (i) Whitehill's use of a separate reservation channel for the purpose of reducing collisions teaches away from piggy-backing the reservation request in a normal data frame as recited in limitations A and B recited in claim 1 (Appeal Br. 9–12; Reply Br. 2–6), and as commensurately recited in claims 17 and 25; and (ii) modifying Whitehill's method that uses a separate reservation channel with Cao's piggy-backing feature would destroy Whitehill's purpose of reducing collisions by performing reservation procedures in a separate, not the same, channel (*see* Appeal Br. 26).

Principal Issue on Appeal

Based on Appellant's arguments in the Appeal Brief (Appeal Br. 8–32) and Reply Brief (Reply Br. 2–22), the following dispositive issue is presented on appeal:

Has Appellant shown that the Examiner erred in rejecting claims 1, 5–13, 16, 17, 19–21, and 24–27 under 35 U.S.C. § 103(a) over the base combination of Whitehill, Giles, and Cao, because there is insufficient motivation to combine Whitehill, Giles, and Cao to teach or suggest the limitations recited in claim 1 (*see, e.g.*, claim 1, limitations A and B), and as commensurately recited in remaining independent claims 17 and 25?

ANALYSIS

We have reviewed Appellant's arguments in the Briefs (Appeal Br. 8–32; Reply Br. 2–22), the Examiner's rejection (Final Act. 3–19) and Advisory Action mailed May 26, 2017 (Advisory Act. 2–23), and the

Examiner's response (Ans. 2–37) to Appellant's arguments in the Appeal Brief. We are persuaded by Appellant's contentions that the Examiner has not sufficiently shown that it would have been obvious to combine the applied references to teach or suggest the subject matter recited in limitations A and B of claim 1, and the commensurate limitations found in remaining independent claims 17 and 25. Our reasoning follows.

The USPTO “must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.” *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation marks and citation omitted); *see Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1322 (Fed. Cir. 2016) (stating that, as an administrative agency, the PTAB “must articulate logical and rational reasons for [its] decisions” (internal quotation marks and citation omitted)).

The Examiner relies on (i) Whitehill as disclosing a method of decentralized medium access control in a communications network having a plurality of stations that uses a reservation procedure (*see* Final Act. 3–4); (ii) Giles as disclosing a protocol that establishes the reservation upon transmission of the reservation request (*see* Final Act. 4); and (iii) Cao as disclosing (a) piggy-backing the reservation request in a normal data frame as in limitation A, and (b) including the reservation request in a frame body or frame header of a data frame as in limitation B (*see* Final Act. 5–6), as recited in claim 1, and commensurately recited in claims 17 and 25. The Examiner reasons it would have been obvious to modify Whitehill's method with the teachings of Giles and Cao (*see* Final Act. 5–6).

However, Whitehill specifically discloses that a primary directive of the invention described is creating and using a *separate reservation channel* to send reservation requests (i.e., using one channel for reservations and another channel for data transmission), which is opposite what is claimed in the instant appeal and taught by Cao (e.g., *piggy-backing* a request in a frame body or frame header in a normal data frame). Whitehill describes using a completely separate reservation channel in order to (i) dramatically reduce message collisions (*see* Abstract; col. 3, ll. 35–37); and (ii) eliminate collisions between request messages and information messages (*see* col. 3, ll. 34–35).

In this light, we agree with Appellant (*see* Appeal Br. 9–12; Reply Br. 2–6) that modifying Whitehill with Cao’s piggy-backing scheme would undermine the main focus of Whitehill of avoiding collisions by providing a separate channel for reservation requests. And, as a result, we cannot agree with the Examiner’s reasoning and conclusions that (i) “[t]he combination of the teachings of Whitehill with the teachings of Cao do NOT destroy the advantage of Whitehill (e.g., using separate reservation channel)” (Ans. 5); (ii) “it is reasonable to **modify** the message or long message part of the teachings of Whitehill (see FIGS. 3a and 3b) to include a reservation request based on the teaching of Cao” (Ans. 4); and (iii)

it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate piggybacking into the data a piggyback field of data packet indicating any change in resources for the future transmitting or subsequent packet as taught by Cao to on the data message of the separate data channels as disclosed by Whitehill for [the] purpose of using a piggy back field in information packets to indicate any change in resources for transmission of the next or a subsequent packet.

Ans. 4.

Based on the foregoing, we concur with Appellant’s assertions (*see* Appeal Br. 11–14; Reply Br. 2) that it would not have been obvious to combine Cao with Whitehill (and Giles), and thus any combination would not teach or suggest transmitting a reservation request for future transmissions where the reservation request (i) is transmitted “piggy-back in a normal data frame” (limitation A); and (ii) is included “in a frame body or frame header of a data frame” (limitation B) as recited in independent claim 1 or the commensurate limitations recited in remaining independent claims 17 and 25. *See Personal Web Technologies, LLC v. Apple, Inc.*, 848 F.3d 987, 991 (Fed. Cir. 2017) (“[T]he Board [must] find that a person of ordinary skill in the art would have been motivated to combine the prior art in the way claimed”); *see also In re Nuvasive*, 842 F.3d 1376, 1383 (Fed. Cir. 2016) (“[C]onclusory statements alone are insufficient and, instead, the finding must be supported by a reasoned explanation” (internal quotations omitted)).

Based on the record before us, we find that the Examiner has not properly established factual determinations and articulated reasoning with a rational underpinning to support the legal conclusion of obviousness for claims 1, 17, and 25, resulting in a failure to establish a prima facie of obviousness. The Examiner has not sufficiently shown why one of ordinary skill in the art would be motivated to combine Whitehill, Giles, and Cao to teach or suggest the subject matter of claims 1, 17, and 25.

As a result, based on the record before us, Appellant has shown the Examiner erred in rejecting independent claims 1, 17, and 25, and thus claims 5–13, 16, 19–21, 24, 26, and 27 depending respectively therefrom,

under 35 U.S.C. § 103(a), and we cannot sustain the Examiner's obviousness rejection of claims 1, 5–13, 16, 17, 19–21, and 24–27 over the base combination of Whitehill, Giles, and Cao.

CONCLUSION

The Examiner erred in rejecting claims 1, 5–13, 16, 17, 19–21, and 24–27 under 35 U.S.C. § 103(a) as being unpatentable over the base combination of Whitehill, Giles, and Cao.

For all of the reasons above, we hold as follows:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 8–11, 13, 16, 17, 24–27	103(a)	Whitehill, Giles, Cao		1, 8–11, 13, 16, 17, 24–27
5, 6, 12, 19, 20	103(a)	Whitehill, Giles, Cao, Matsunaga et al. ⁴		5, 6, 12, 19, 20
7, 21	103(a)	Whitehill, Giles, Cao, Shaffer et al. ⁵		7, 21
Overall Outcome				1, 5–13, 16, 17, 19–21, 24–27

REVERSED

⁴ US 6,704,932 B1; issued March 9, 2004.

⁵ US 5,960,001; issued Sept. 28, 1999.