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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NORBERT BALBIERER, JOSEF NÖBAUER, and HELGE ZINNER

Appeal 2018-006982
Application 14/400,480
Technology Center 2400

Before MARC S. HOFF, BETH Z. SHAW, and JOYCE CRAIG, *Administrative Patent Judges.*

CRAIG, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 12–22. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as assignee Continental Automotive GmbH. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to a method for transmitting data using an Ethernet AVB transport protocol between nodes of a motor vehicle. Claim 12, reproduced below, is illustrative of the claimed subject matter:

> 12. A method for transmitting data using an Ethernet AVB transport protocol between nodes of a motor vehicle, comprising:
>
> reserving resources necessary for the transmission of the data by reservation messages from a dedicated reservation protocol;
>
> setting flow of data from a node to a particular transmission rate and/or data rate;
>
> transmitting data at cyclic intervals via an Ethernet-based network by inputting the data into a transmission frame (MAC frame) and forwarding to local transmitters (PHY);
>
> deactivating the local transmitters and receivers (PHY) of a node in non-use periods, in which no data need to be transmitted;
>
> activating again the local transmitters and receivers (PHY) of a node provided that data are pending transmission in a transmission frame (MAC frame), wherein the local transmitters and receivers (PHY) are available for transmission following an activation time (Tw) required by a power saving protocol; and
>
> activating the local transmitters and/or receivers of the nodes based on a reservation message and a setting of the transmission rate and/or data rate, the activating being effected by waking the local transmitters and/or receivers by direct access to a state signal of the local transmitters and/or receivers that wakes the local transmitters and/or receivers from an energy saving mode of the power saving protocol prior to the transmission of data from the transmission frame by at least the activation time Tw required by the power saving protocol, wherein, even if there is no useful data pending transmission in the MAC layer at a scheduled transmission time known beforehand by a local transmitter and/or receiver of the node, the local transmitter and/or receiver of the node is/are activated prior

> to the scheduled transmission time by at least the activation time (Tw), whereby the data packet to be transmitted can, when put into the transmission frame (MAC frame) of the MAC layer, immediately be transmitted without delay.

REJECTIONS

Claims 12–19, 21, and 22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Diab et al. (US 2009/0158360 A1; published June 18, 2009) ("Diab"), *Audio Video Bridging (AVB) Systems*, IEEE Std. 802.1BA (IEEE, published 2011) ("IEEE 802.1BA"), *Virtual Bridged Local Area Networks, Amendment 14: Stream Reservation Protocol (SRP)*, IEEE Std. 802.1Qat (IEEE, published 2010) ("IEEE 802.1Qat"), Hulyalkar (US 2001/0029197 A1; published Oct. 11, 2001), Powell et al. (US 2011/0022699 A1; published Jan. 27, 2011) ("Powell"), and Zhang et al. (US 2012/0288279 A1; published Nov. 15, 2012) ("Zhang"). Final Act. 6–20.

Claim 20 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Diab, IEEE 802.1BA, IEEE 802.1Qat, Hulyalkar, Powell, Zhang, and Krishnamurthy (US 2013/0007762 A1; published Jan. 3, 2013). Final Act. 20–21.

ANALYSIS

Rejection of Claims 12–22 Under 35 U.S.C. § 103(a)

We have reviewed the rejections of claims 12–22 in light of Appellant's arguments that the Examiner erred. We have considered in this Decision only those arguments Appellant actually raised in the Briefs. Any other arguments Appellant could have made, but chose not to make, in the Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

With respect to independent claim 12, Appellant contends that the cited portions of Diab and IEEE 802.1BA do not teach or suggest recited features of claim 12. Appeal Br. 8. In particular, Appellant contends that "neither of these references teaches or suggests that their incompatible time requirements can be reconciled." *Id.* (emphasis omitted).

Appellant presents no persuasive arguments in support of that contention, however. It is well settled that mere attorney arguments and conclusory statements, which are unsupported by factual evidence, are entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997). Thus, Appellant presents insufficient persuasive explanation or objective evidence to rebut the Examiner's findings regarding the teachings of the prior art.

For these reasons, we are not persuaded that the Examiner erred in finding that the combination of Diab, IEEE802.1BA, IEEE 802.1Qat, Hulyalkar, Powell, and Zhang teaches or suggests the recited elements of claim 12.

Appellant next contends that the Examiner erred in concluding that "it would have been obvious to combine the method of Diab in view of IEEE802.1BA with the teachings of IEEE 802.1Qat to provide quality of service." Appeal Br. 8 (quoting Final Act. 10). Appellant argues that

> in the Energy Efficient Ethernet (EEE), in which strict minimum time limits for activation and deactivation times must not be exceeded, the minimum time limits are incompatible with the transmission rates employed by the MSRP protocol (Multiple Stream Reservation Protocol), which is part of AVB standard 802.lQat.

Id. According to Appellant, in view of this incompatibility, one of ordinary skill in the art "would not have any motivation or reason to

modify Diab in the proposed manner since such modification would introduce to Diab the incompatibility problems associated with these two references." Appeal Br. 8 (emphasis omitted).

We are not persuaded that the Examiner erred, for the following reasons. The Examiner found that Diab teaches the basic structure of an Ethernet AVB based system within a motor vehicle. Ans. 3. The Examiner also found that IEEE 802.1BA teaches a method of providing power reduction in an Ethernet based network. *Id.* The Examiner further found that IEEE 802.1Qat teaches methods for reserving necessary bandwidth for a transmission between nodes. *Id.* The Examiner concluded that the combined teachings would have suggested to an artisan of ordinary skill,

> methods and features for improving the AVB network of Diab to provide a reduction in power consumption though allowing inactive devices to switch to a lower power idle state while also improving quality of service and bandwidth utilization of the network by communicating and agreeing to the bandwidth needs of a given link between nodes through the exploit exchange of these bandwidth requirements between nodes.

Ans. 5.

The Examiner also found that timing constraints are apparent in each of the disputed references. Ans. 5. For example, the Examiner found that IEEE 802.1BA itself discloses that a wake time is required to be considered when waking a low power idle node such that transmissions are not missed. *Id.* Thus, the Examiner concluded an artisan of ordinary skill "would have recognized the mutual benefits of features of each IEEE specification and would have been motivated to seek a solution to minor differences in timing needs." *Id.* Indeed, the Examiner found that Powell teaches such a solution. Ans. 5 (citing Powell Figs. 3C, 4, ¶¶ 53–54).

A rejection based on obviousness only needs to be supported by "some articulated reasoning with some rational underpinning" to combine known elements in the manner required by the claim. *See KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 418 (2007). For the reasons discussed above and in the Final Rejection and Answer, we find the Examiner provides "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Final Act. 10; *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Moreover, it is well settled that "a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements." *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (citations omitted). Nor is the test for obviousness whether a secondary reference's features can be bodily incorporated into the structure of the primary reference. *See Keller*, 642 F.2d at 425. The Supreme Court has held that "analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 550 U.S. at 418.

We are also not persuaded that the Examiner engaged in improper hindsight, as the Examiner has set forth articulated reasoning with rational underpinnings for the combination. Final Act. 8, 10; Ans. 5. Appellant has not identified any knowledge relied upon by the Examiner that was gleaned only from Appellant's disclosure and that was not otherwise within the level of ordinary skill in the art at the time of invention. *See In re McLaughlin*, 443 F.2d 1392, 1395 (CCPA 1971). Nor has Appellant provided objective evidence of secondary considerations, which "operates as a beneficial check

on hindsight." *Cheese Sys., Inc. v. Tetra Pak Cheese and Powder Sys., Inc.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

For these reasons, we are not persuaded that the Examiner erred in concluding that it would have been obvious to one having ordinary skill in the art to combine the method of Diab in view of IEEE 802.1BA with the teachings of IEEE 802.1Qat in order to provide quality of service. *See* Final Act. 10.

Accordingly, we sustain the Examiner's 103(a) rejection of independent claim 12. We also sustain the Examiner's rejection of dependent claims 13–22, not argued separately with particularity. *Id.* at 10.

DECISION

We affirm the decision of the Examiner rejecting claims 12–22.

DECISION SUMMARY

Claims Rejected	**35 U.S.C. §**	**Reference(s)/Basis**	**Affirmed**	**Reversed**
12–19, 21, 22	103(a)	Diab, IEEE 802.1BA, IEEE 802.1Qat, Hulyalkar, Powell, Zhang	12–19, 21, 22	
20	103(a)	Diab, IEEE 802.1BA, IEEE 802.1Qat, Hulyalkar, Powell, Zhang, Krishnamurthy	20	
Overall Outcome:			12–22	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED