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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ERAN GLICKMAN, RON BAR, IDAN BEN AMI, and
BENNY MICHALOVICH

Appeal 2018-004163
Application 14/359,932
Technology Center 2100

Before BRYAN F. MOORE, JASON J. CHUNG, and
BETH Z. SHAW, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals the Final Rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention relates to a controller, serial advanced technology attachment (SATA) system and method of operation. Spec. 1:6–7. Claim 1 is illustrative of the invention and is reproduced below:

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. According to Appellant, NXP USA, Inc. is the real party in interest. Appeal Br. 1.

1. A controller for operably coupling a drive unit to a host unit in a serial advanced technology attachment (SATA) system, wherein the controller comprises a hardware processor arranged to:

receive a plurality of SATA data frames;

determine that a sequence of uncorrupted primitives in at least one of the plurality of SATA data frames matches a first primitive sequence stored at a register, the first primitive sequence including more than one primitive, wherein the first primitive sequence adversely affects a performance of the SATA system; and

replace the sequence of primitives with a second primitive sequence in response thereto.

Appeal Br. 9 (Claims Appendix).

REJECTIONS

Claims 1–7 and 9–20 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Schauer (US 7,047,335 B2; issued May 16, 2006), Liu (US 7,634,692 B2; issued Dec. 15, 2009), and Carmichael (US 7,619,984 B2; issued Nov. 17, 2009). Final Act. 2–14.

Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Schauer, Liu, Carmichael, and Carmichael (US 2006/0149878 A1; published July 6, 2006). Final Act. 8–9.

ANALYSIS

I. Claims 1–15 and 17–20 Rejected Under 35 U.S.C. § 103

The Examiner finds that although Liu teaches determining that a sequence of corrupted primitives in at least one of the plurality of SATA data frames matches a first primitive sequence stored at a register and replacing the sequence of primitives with a second primitive sequence in

response thereto, Liu fails to teach uncorrupted primitives. Final Act. 3 (citing Liu, 5:43–47). Moreover, the Examiner finds Carmichael teaches a frame with an error condition may be received successfully as long as the number of errors is less than a determined threshold, which the Examiner maps to the limitation “uncorrupted” recited in claims 1 and 16. Final Act. 3–4 (citing Carmichael, 5:37–48). Additionally, the Examiner finds Appellant’s Specification states “[i]n some examples, the sequence determined as being in error may be an error primitive that is typically understood to be a legal (allowable) sequence or legal (allowable) primitive.” Ans. 2 (citing Spec. 5:21–6:2).

Appellant argues because Liu teaches replacing a sequence of corrupted primitives (rather than uncorrupted primitives as required by claim 1), Carmichael cannot be used to overcome the shortcomings of Liu. Appeal Br. 4–5; Reply Br. 3–4. In addition, Appellant argues Carmichael fails to teach uncorrupted primitives because Carmichael teaches indicating reception of a frame successfully with one or more errors as long as the number of errors is less than a determined threshold. Appeal Br. 5–6; Reply Br. 2–3. We disagree with Appellant.

As for Appellant’s first argument, one cannot show nonobviousness “by attacking references individually” where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). In this case, the Examiner relies on Liu to teach determining that a sequence of corrupted primitives in at least one of the plurality of SATA data frames matches a first primitive sequence stored at a register and replacing the sequence of primitives with a second primitive sequence in response thereto.

Final Act. 3 (citing Liu, 5:43–47). Moreover, the Examiner relies on Carmichael to teach a frame with an error condition may be received successfully as long as the number of errors is less than a determined threshold, which we agree teaches the limitation “uncorrupted” recited in claims 1 and 16. Final Act. 3–4 (citing Carmichael, 5:37–48).

Furthermore, we disagree with Appellant’s argument that Carmichael fails to teach uncorrupted primitives. Appeal Br. 5–6; Reply Br. 2–3. That is, we agree with the Examiner’s finding that Appellant’s Specification and Carmichael are both permitting errors in successfully received primitives as long as the errors are beneath a determined threshold. Ans. 2 (citing Spec. 5:21–6:2) (the Specification states “[i]n some examples, the sequence determined as being in error may be an error primitive that is typically understood to be a legal (allowable) sequence or legal (allowable) primitive”).

Accordingly, Appellant has not persuaded us of error in the Examiner’s rejection of: (1) independent claims 1, 14, and 15; and (2) dependent claims 2–13 and 17–20 under 35 U.S.C. § 103.

II. Claim 16 Rejected Under 35 U.S.C. § 103

The Examiner finds Liu teaches a current primitive sequence is compared/matched to another primitive sequence (i.e., primitive code book 306) to determine if the current primitive should be replaced, which the Examiner maps to the limitation

a programmable modified primitive sequence queue (MPSQ) configured to store the second sequence to replace the first sequence; and a primitive modification controller (PMC) configured to transmit the second sequence from the MPSQ in response to detecting the sequence of primitives in the at least

one of the plurality of SATA data frames matches the first primitive sequence stored (hereinafter “disputed limitation”) recited in claim 16. Final Act. 3, 7 (citing Liu, 5:51–58; 6:44–47); Ans. 3–4.

Appellant argues Liu fails to teach replacing the sequence of primitives when the sequence matches the primitive sequence stored at the CPSQ because Liu merely teaches replacing corrupted primitives with uncorrupted primitives. Appeal Br. 6–7; Reply Br. 4–5. We disagree with Appellant.

Liu teaches a current primitive sequence is compared/matched to another primitive sequence (i.e., primitive code book 306) to determine if the current primitive should be replaced. Liu, 6:44–47 (cited at Final Act. 7); Ans. 3–4. Further, Liu teaches replacing primitives. Liu, 5:51–58 (cited at Final Act. 3). We, therefore, agree with the Examiner’s finding that Liu teaches the disputed limitation. Final Act. 3, 7 (citing Liu, 5:51–58; 6:44–47); Ans. 3–4.

Accordingly, Appellant has not persuaded us of error in the Examiner’s rejection of dependent claim 16 under 35 U.S.C. § 103.

We have only considered those arguments that Appellant actually raised in the Briefs. Arguments Appellant could have made, but chose not to make, in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-7, 9-20	103	Schauer, Liu, Carmichael	1-7, 9-20	
8	103	Schauer, Liu, Carmichael, and Carmichael	8	
Overall Outcome			1-20	

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

AFFIRMED