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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES W. MEYER and CORY KANSKI

Appeal 2010-008708
Application 11/318,356
Technology Center 2100

Before: ERIC B. CHEN, JOHNNY A. KUMAR, and
MICHAEL J. STRAUSS, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 39-63. Claims 1-38 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

The claims are directed to an arbitration system and method for memory responses in a hub-based memory system. Claim 39, reproduced below, is illustrative of the claimed subject matter:

39. A method of processing and forwarding memory responses in a memory system including a plurality of memory modules, each memory module including a memory hub coupled to memory devices, and the method comprising:

storing local memory responses having data retrieved from the memory devices, the local memory responses made in response to associated memory requests requesting the retrieved data from the memory devices;

storing downstream memory responses having data retrieved from downstream memory modules, the downstream memory responses made in response to associated memory requests requesting data from the downstream memory modules;

applying in each hub an independent arbitration algorithm to determine an order in which the stored local and downstream memory responses are forwarded to an upstream memory module; and

forwarding the local and downstream memory responses upstream according to the determined order.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Talbot	US 6,272,600 B1	Aug. 7, 2001
Sah	US 2003/0177320 A1	Sep. 18, 2003

REJECTIONS¹

The Examiner made the following rejections:

Claims 39-44, 47, 48, 50-52, 54-56, 58-60, 62 and 63 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Sah. Ans. 3.

Claims 45, 46, 49, 53, 57 and 61 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sah and Talbot. Ans. 9.

ISSUE²

Appellants present the issue whether Sah discloses arbitrating between local and downstream memory responses and forwarding the responses upstream according to the arbitration rule thereby anticipating claim 39 under 35 U.S.C. § 102(e).

ANALYSIS

Appellants contend that “while [Sah] discusses modifying the order of read and write *requests*, arbitrating between local and downstream memory responses and forwarding the *responses* upstream according to the arbitration rule is not disclosed.” App. Br. 12 (emphasis added.) In particular, Appellants argue that:

The reordering of read and write transactions described in paragraphs 177 -180 [of Sah] does not disclose the

¹ Based on the dependencies of the claims and the dispositive issue, we decide the appeal of the rejection of claims 39-63 on the basis of claim 39.

² We note that Appellants’ arguments present additional issues; however, we do not reach these issues, as this issue is dispositive of the appeal.

application in each hub of an independent arbitration algorithm or the forwarding of local and downstream memory responses according to a determined order. As argued previously, the read and write transactions that are re-ordered as described in paragraphs 177-180 have yet to be executed by a memory. Consequently, the reordering of read and write transactions is not analogous to applying an independent algorithm to determine the order in which local and downstream memory responses are forwarded upstream, as recited in claim 39 because neither the read nor write transactions have “data retrieved” from a memory.

App. Br. 12.

We agree with Appellants. Although the Examiner finds that “every request must have a response, otherwise reading and writing of memory would not occur” and “[t]he cited paragraphs clearly show that the requests and responses ‘share the same medium’ which means that Sah can use requests and responses interchangeably and are queued together” (Ans. 11), the cited portions of Sah only disclose that the re-order queues are filled with *requests* with no mention of responses. Sah para. [0177] – [0180]. Therefore, even if we were to accept that “every request must have a response” as asserted by the Examiner, Sah specifically discloses re-ordering of requests without mentioning responses. Failing to disclose determining an order in which stored local and downstream memory *responses* are forwarded, the Sah disclosure fails to anticipate claim 39.

Accordingly, we will not sustain the rejection of claim 39 under 35 U.S.C. § 102(e) and, for the same reason, we will not sustain the rejection of independent claims 48, 52, 56 and 60 and dependent claims 40-44, 47, 50, 51, 54, 55, 58, 59, 62 and 63. Furthermore, we will not sustain the rejection of claims 45, 46, 49, 53, 57 and 61 under 35 U.S.C. § 103(a) as being

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unpatentable over Sah and Talbot, as the Talbot reference fails to cure the deficiency in the base rejection addressed *supra*.

CONCLUSION

Appellants have persuaded us of error in the Examiner's decision to reject claims 39-44, 47, 48, 50-52, 54-56, 58-60, 62 and 63 under 35 U.S.C. § 102(e) as being anticipated by Sah and claims 45, 46, 49, 53, 57 and 61 under 35 U.S.C. § 103(a) over Sah and Talbot. Thus, we will not sustain the Examiner's rejections of claims 39-63.

DECISION

The decision of the Examiner to reject claims 39-63 is reversed.

REVERSED

msc