

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

## **UNITED STATES PATENT AND TRADEMARK OFFICE**

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### **BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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Ex parte JOERG WINKLER, FRANK BARTH, and LARRY HEWITT

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Appeal No. 2006-3044  
Application No. 10/285,939

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#### **ON BRIEF**

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Before HAIRSTON, JERRY SMITH, and HOMERE, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

### **DECISION ON APPEAL**

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-38.

### **THE INVENTION**

The disclosed invention pertains to a response reordering mechanism.

Representative claim 1 is illustrative:

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1. A southbridge device comprising:

- a transmit engine adapted to receive non-posted read requests from at least one requestor and transmit upstream commands based on said non-posted read requests, each of said upstream commands being uniquely identified by a command tag;
- a receive engine adapted to receive response data in reply to commands previously transmitted by said transmit engine, and transmit responses to said at least one requestor based on said response data; and
- a response reordering mechanism adapted to control said receive engine to transmit said responses in correct order, said response reordering mechanism comprising a buffer unit for storing received response data, said buffer unit having a plurality of buffer elements each being uniquely assigned to one of said command tags.

### **THE REFERENCES**

The examiner relies upon the following references:

Harriman et al. (Harriman)                  6,112,265                  Aug. 29, 2000

- AAPA - Appellants' Admitted Prior Art.

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- HyperTransport Technology Consortium, "HyperTransport I/O Link Specification", Revision 1.03 (Oct. 10, 2001), 17-18, 38-40, 61-62 and 165-166. ("HTTC").

## **THE REJECTIONS**

The following rejections are on appeal before us:

1. Claims 1, 2, 5-7, 9-22, 25-27 and 29-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of AAPA in view of Harriman.
2. Claims 3, 4, 8, 23, 24 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the teachings of AAPA in view of Harriman, and further in view of HTTC.

Rather than repeat the arguments of appellants or the examiner, we make reference to the briefs and the answer for the respective details thereof.

## **OPINION**

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the

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appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer. Only those arguments actually made by appellants have been considered in this decision. Arguments which appellants 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)(vii)(2004).

See also In re Watts, 354 F.3d 1362, 1368, 69 USPQ2d 1453, 1458 (Fed. Cir. 2004).

It is our view, after consideration of the record before us, that the evidence relied upon supports the examiner's rejection of the claims on appeal. Accordingly, we affirm.

### **GROUPING OF CLAIMS**

We consider the obviousness of the following logical groups of claims, as defined under separate subheadings and argued separately by appellants in the briefs.

GROUP A: Claims 1, 2, 5-7 and 9-18 [brief, page 5].

GROUP B: Claim 19 [brief, page 7].

GROUP C: Claim 20 [brief, page 10].

GROUP D: Claims 21, 22, 25-27 and 29-38 [brief, page 12].

GROUP E: Claim 3, 4 and 8 [brief, page 15].

GROUP F: Claim 23, 24 and 38 [brief, page 15].

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In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). The examiner must articulate reasons for the examiner's decision. In re Lee, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). In particular, the examiner must show that there is a teaching, motivation, or suggestion of a motivation to combine references relied on as evidence of obviousness. Id. at 1343, 61 USPQ2d at 1433-34. The examiner cannot simply reach conclusions based on the examiner's own understanding or experience - or on his or her assessment of what would be basic knowledge or common sense. Rather, the examiner must point to some concrete evidence in the record in support of these findings. In re Zurko, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). Thus the examiner must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the examiner's conclusion. However, a suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a

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whole, rather than expressly stated in the references. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. In re Kahn, 441 F.3d 977, 987-88, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (citing In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000)). See also In re Thrift, 298 F. 3d 1357, 1363, 63 USPQ2d 2002, 2008 (Fed. Cir. 2002). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

**GROUP A**, claims 1, 2, 5-7 and 9-18

We consider first the examiner's rejection of claims 1, 2, 5-7 and 9-18 as being unpatentable over the teachings of AAPA in view of Harriman.

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Since appellants' arguments with respect to this rejection have treated these claims as a single group which stand or fall together, we will consider independent claim 1 as the representative claim for this rejection. See 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Appellants argue that the cited references do not teach nor suggest "buffer elements each being uniquely assigned to one of said command tags," as claimed [brief, page 6, emphasis added]. Appellants further argue that the examiner's interpretation of the term "uniquely" contradicts the dictionary definition of "unique" [id.]. Appellants assert that Harriman's disclosure of multiple buckets that may be associated with a single command tag teaches away from the language of the claim [brief, page 7].

The examiner disagrees [answer, page 18]. The examiner argues that Harriman's buffer unit (i.e., Read Data Return Buffer (RDRB) 270 of fig. 2A) stores received response data (col. 5, lines 52-65), where the buffer unit (RDRB 270) has a plurality of buffer elements (buckets 272, fig. 2A) with each bucket being uniquely assigned to one of the command tags (col. 9, lines 64-67) [answer, page 18]. The examiner asserts that Harriman's load logic uses the command tag to load the command response into appropriate bucket(s) in the RDRB (i.e., buffer) and this implies that each buffer element is uniquely assigned to one of the command tags [id.].

The examiner acknowledges that Harriman's read response data occupies one or more buckets 272 of RDRB 270, depending on the size of the data block requested by the read command (col. 5, lines 57-59) [id.]. However, the examiner maintains that each bucket of the plurality of buckets is uniquely assigned to one of the command tags, even though one or more buckets might be assigned to a particular command tag (i.e., depending on the size of the data block requested by the read command) [id.]. The examiner points out that the language of the claim merely requires: "a plurality of buffer elements each being uniquely assigned to one of said command tags" [id.]. The examiner notes that the claim does not recite: "a plurality of buffer elements each being assigned to a unique one of said command tags" [id.]. The examiner concludes that Harriman does not teach away from the instant claimed invention [answer, page 19].

In the reply brief, appellants point to pages 8 and 9 of the instant specification as supporting appellants' claim interpretation [reply brief, pages 3 and 4]. Appellants assert that Harriman teaches a buffer having a plurality of buckets that provide general storage to commands and data based on availability, but not based on unique assignments [reply brief, page 5]. Appellants again assert that Harriman teaches away from the instant claimed invention by disclosing multiple buckets that may be associated with a single command tag [id.].

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We begin our analysis by noting that “[d]uring patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification.” In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). The Court of Appeals for the Federal Circuit has stated that the “broadest reasonable interpretation” rule recognizes that “before a patent is granted the claims are readily amended as part of the examination process.” Burlington Indus. v. Quigg, 822 F.2d 1581, 1583, 3 USPQ2d 1436, 1438 (Fed. Cir. 1987). Our reviewing court has reaffirmed that a patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application. In re Bigio, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004) (internal citation omitted). Finally, the broadest reasonable interpretation rule “serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified.” In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004) (quoting In re Yamamoto, 740 F.2d 1569, 1571-72, 222 USPQ 934, 936 (Fed. Cir. 1984)).

In the instant case, we agree with the examiner that the claim broadly but reasonably reads on the Harriman reference in the manner asserted by the examiner. We note that appellants have had ample opportunity to amend their claims to eliminate any such ambiguity in claim term meaning.

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As recognized by the examiner, the claim does not recite: "a plurality of buffer elements each being assigned to a unique one of said command tags." Alternately, appellants could have amended the claims to recite: "a plurality of buffer elements each being assigned to a different one of said command tags." After carefully considering all of the evidence before us, we find that the scope of the disputed claim language broadly but reasonably encompasses the alternate interpretation argued by the examiner. Because the broad language of the independent claims does not preclude the alternate interpretation argued by the examiner, we do not find appellants' arguments persuasive that Harriman teaches away from the instant claimed invention. Therefore, we will sustain the examiner's rejection of representative claim 1 for essentially the same reasons argued by the examiner in the answer.

We further note that appellants have not presented any substantive arguments directed separately to the patentability of dependent claims 2, 5-7 and 9-18. In the absence of a separate argument with respect to the dependent claims, those claims stand or fall with the representative independent claim. See In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). See also 37 C.F.R. § 41.37(c)(1)(vii)(2004). Therefore, we will sustain the examiner's rejection of these claims for the same reasons set forth by the examiner in the rejection.

**Groups B, C, D, E, and F**

We note that all remaining Groups B through F (as argued separately by appellants) likewise turn upon the scope of the claim language that recites: “a plurality buffer elements each being uniquely assigned to one of said command tags” [see independent claims 1, 19, 20 and 21]. Because we have fully addressed this point of argument supra, we will sustain the examiner’s rejection of all claims in Groups B through F for the same reasons argued by the examiner in the answer and discussed above. Therefore, we will sustain the examiner’s rejection of claims 19, 20, 21, 22, 25-27 and 29-38 as being unpatentable over AAPA in view of Harriman. We will also sustain the examiner’s rejection of claims 3, 4, 8, 23, 24 and 28 as being unpatentable over AAPA in view of Harriman, and further in view of HTTC.

In summary, we have sustained the examiner’s rejections of all claims on appeal. Therefore, the decision of the examiner rejecting claims 1-38 is affirmed.

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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).

AFFIRMED

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KENNETH W. HAIRSTON )  
Administrative Patent Judge )  
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) BOARD OF PATENT  
JERRY SMITH )  
Administrative Patent Judge )  
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) APPEALS AND  
JEAN R. HOMERE )  
Administrative Patent Judge )  
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JS/rwk

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MEYERTONS, HOOD, KIVLIN,  
KOWERT & GOETZEL (AMD)  
P.O. BOX 398  
AUSTIN, TX 78767-0398