The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RAVI KUMAR ARIMILLI, VICENTE ENRIQUE CHUNG,
GUY LYNN GUTHRIE and JODY BERN JOYNER

Appeal No. 2003-0351
Application 09/436,421

ON BRIEF

Before THOMAS, HAIRSTON and JERRY SMITH, 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 1-4, 6-10, 12, 19 and 20. Claims 14 and 17 have been cancelled. Claims 5, 11, 13, 15, 16 and 18 have been indicated to contain allowable subject matter by the examiner. A first amendment after final rejection was filed on April 8, 2002 but was denied entry by the examiner. A second

amendment after final rejection was filed on June 17, 2002 and was entered by the examiner.

The disclosed invention pertains to a method and apparatus for dynamically selecting the order in which requested data is transferred from a cache memory to a data processor.

Representative claim 1 is reproduced as follows:

1. A data processing system comprising:

a processor unit;

a cache;

means for coupling said cache to said processor unit to effectuate data transfer;

means for dynamically selecting an order in which to transmit said data from a cache line of said cache, from among several available orders in which said data may be transmitted;

means for encoding the selected order in a selected order bit set; and

means for issuing to said coupling means said selected order bit set ahead of said data, wherein said selected order bit set alerts said processor unit of said selected order and said data is transmitted in said selected order.

The examiner relies on the following reference:

Hunt	5,781,923	July 14, 1998

Claims 1-4, 6-10, 12, 19 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Hunt.

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 rejection advanced by the examiner and the evidence of anticipation relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

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

Appellants have indicated that for purposes of this appeal the claims will all stand or fall together as a single group [brief, page 4]. Consistent with this indication appellants have made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will

stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Therefore, we will consider the rejection against independent claim 1 as representative of all the claims on appeal.

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

The examiner has indicated how he reads the claimed invention on the disclosure of Hunt [answer, pages 3-4]. Appellants argue that Hunt does not teach or suggest selecting an order for data transmission or encoding the order in a selected order bit set. Appellants argue that Hunt does not provide a cache line-by-cache line ordering of data retrieval or the issuing of the selected order bit set ahead of the data [brief, pages 4-5]. The examiner responds that the data in Hunt is

ordered and transferred in either a big endian format or a little endian format, which format is determined by an encoded current byte format bit. The examiner also asserts that appellants' arguments are not commensurate in scope with the claimed invention because the claims do not require a cache line-by-cache line ordering of data. The examiner observes that the manner in which data from the cache memory in Hunt is transferred to the processor meets the dynamically selecting step of claim 1. The examiner also argues that the byte order format in Hunt is set when the application is started which is before any data is transferred. The examiner asserts that this meets the issuing the selected order bit set ahead of the data as claimed [answer, pages 5-7].

We will sustain the examiner's rejection of representative claim 1, and therefore, of all the claims on appeal. We agree with the examiner that claim 1 does not require that the order of data transmission be decided on a cache line-by-cache line basis. Claim 1 only recites that an order is selected from several available orders for each line of the cache. Although the dynamic selection in Hunt is made before the data is stored in the cache memory, we find that the operation in Hunt still meets the invention of claim 1. Specifically, if the

data in Hunt is stored in the cache in little endian format, then the data will be sent to the processor from high order to low order, for example. Alternatively, if the data is stored in the cache in big endian format, then the data will be sent to the processor from low order to high order. Thus, the order in which data is sent to the processor, low to high or high to low, is dynamically selected by ordering the data within the cache.

We also agree with the examiner that the selected order bit set, which is a single bit in the endian format situation, is issued to the coupling means to set the byte order format tag 220 in Hunt before any data is transferred to the processor. This operation is considered to fully meet the issuing step of claim 1.

In summary, we find that the examiner has established a prima facie case of anticipation. We have considered each of appellants' arguments, but we are not persuaded of error in the rejection by any of these arguments. Therefore, the decision of the examiner rejecting claims 1-4, 6-10, 12, 19 and 20 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

JAMES D. THOMAS Administrative Patent Judge	)	
KENNETH W. HAIRSTON Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JERRY SMITH Administrative Patent Judge	)	

JS/ki

Bracewell & Patterson, LLP
P.O. Box 969
Austin, TX 78767-0969