

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIROAKI FUJII,
YASUHIRO INAGAMI
and
SHIGEO TAKEUCHI

Appeal No. 1997-2161
Application 08/172,170¹

HEARD: October 5, 1999

¹ Application for patent filed December 23, 1993.

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Before THOMAS, FLEMING and FRAHM, **Administrative Patent Judges**.

FLEMING, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 13, all the claims pending in the present application.

The invention relates to a data processor which can execute a program at a high speed by enabling a number of registers to be used.

Independent claim 1 is reproduced as follows:

1. A data processor comprising:

a plurality of register queues each comprised of physical registers, each register queue having a queue number unique in the data processor and each physical register having a physical number unique in the data processor; and

a physical register number forming means, connected to said plurality of register queues, for converting a logical register number designated in an instruction into a physical register number, said logical register number indicating a queue number, the physical register having the physical register number belonging to the register queue having the logical register number, and for transferring said physical register number to said plurality of register queues, the physical

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register having the physical register number being used for executing the instruction.

The Examiner relies on the following references:

Hattori et al. (Hattori)	5,134,562	July 28, 1992
Sakuma et al. (Sakuma)	5,148,542	Sept. 15, 1992

Claims 3, 4 and 11 through 13 stand rejected under 35 U.S.C. § 112, second paragraph. Claim 1 is rejected under 35 U.S.C. § 102 as being anticipated by Sakuma. Claims 10 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sakuma in view of Hattori. The rejection of claims 2 and 5 through 9 have been withdrawn by the Examiner. See page 5 of the Examiner's answer.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the briefs² and answer for the respective details thereof.

² Appellants filed an appeal brief on June 18, 1996. Appellants filed a reply brief on October 15, 1996. The Examiner mailed a communication on January 7, 1997 stating that the reply brief had been entered and considered but no further response by the Examiner was deemed necessary.

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OPINION

We will not sustain the rejection of claims 3, 4 and 11 through 13 under 35 U.S.C. § 112, second paragraph.

Further-

more, we will not sustain the rejection of claim 1 under 35 U.S.C. § 102 nor will we sustain the rejection of claims 10 and 11 under 35 U.S.C. § 103.

Analysis of 35 U.S.C. § 112, second paragraph, should begin with the determination of whether claims set out and

circumscribe the particular area with a reasonable degree of precision and particularity; it is here where definiteness of the language must be analyzed, not in a vacuum, but always in light of teachings of the disclosure as it would be interpreted by one possessing ordinary skill in the art. ***In re Johnson***, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977), ***citing In re Moore***, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (1971). Furthermore, our reviewing court points out that a

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claim which is of such breadth that it reads on subject matter disclosed in the prior art is rejected under 35 U.S.C. § 102 rather than under 35 U.S.C. § 112, second paragraph. **See In re Hyatt**, 708 F.2d 712, 715, 218 USPQ 195, 197 (Fed. Cir. 1983) citing **In re Borkowski**, 422 F.2d 904, 909, 164 USPQ 642, 645-46 (CCPA 1970).

On page 4 of the Examiner's answer, the Examiner argues that the size and location of the physical registers is unclear. The Examiner further argues that claims 3 and 4 are essentially duplicate claims because claim 3 appears to be a push and pop stack in a normal mode and circular queue in the queue accessing mode.

Appellants argue on page 12 of the brief that the location of the physical registers are within the data register

group of the data processor as claimed and illustrated in the drawings. Appellants also argue that the size of the physical registers are not relevant to Appellants' invention. Appellants point out that their invention is not concerned with the

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size of the registers but is concerned with providing an expanded number of registers larger than can be normally designated by a logical register number in the register specifier field of an instruction.

Turning to Appellants' specification, we note that Appellants disclose in figure 1 the construction of the data processor, including physical registers, as recited in Appellants' claims. Furthermore, we note that claims 3 and 4 are not duplicate claims because they recite numerous features that are different from each other. Therefore, we find that claims 3, 4 and 11 through 13 clearly describe the subject matter of Appellants' invention so as to enable those of ordinary skill in the art to understand the metes and bounds of the claims.

Claim 1 stands rejected under 35 U.S.C. § 102 as being anticipated by Sakuma. On page 5 of the Examiner's answer, the Examiner argues that Sakuma discloses a data processing system in figure 9 containing an instruction register, element 202, which

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is used to store an instruction prior to decoding by the decoder, element 203, and a plurality of register banks, element 205. The Examiner argues that the type of access to the registers is determined by the fields in the instructions.

Appellants argue on page 6 of the brief that Sakuma fails to teach or suggest the physical register number forming means which is connected to a plurality of register queues for combining a logical register number designated in an instruction into a physical register number which indicates a particular register queue of plural register queues and for transferring the physical register number to the plurality of register queues so as to identify a particular register queue as recited in Appellants' claim 1. Appellants argue that the Examiner has erred by failing to find any teaching or suggestion in Sakuma of a physical register number forming means as recited in claim 1.

The Examiner has failed to set forth a ***prima facie*** case. It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. ***See In re King***, 801 F.2d 1324,

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1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

Upon our review of Sakuma, we fail to find that Sakuma teaches Appellants' claimed physical register number forming means. We note that Sakuma does disclose a bank of registers 205. In column 8, lines 34-59, Sakuma discloses that the group of register banks 205 contains registers corresponding to tasks. Sakuma does not disclose converting a logical register number designated in an instruction into a physical register number which indicates a particular register queue of a plurality of register queues. Therefore, we find that Sakuma fails to teach every element as recited in Appellants' claim 1.

Claims 10 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sakuma in view of Hattori.

It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such

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teachings or suggestions. ***In re Sernaker***, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." ***Para-Ordnance***

Mfg. v. SGS Importers Int'l, Inc., 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), ***cert. denied***, 519 U.S. 822 (1996) ***citing W. L. Gore & Assoc., Inc. v. Garlock, Inc.***, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), ***cert. denied***, 469 U.S. 851 (1984).

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

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As we have pointed out above, we fail to find that Sakuma teaches converting a logical register number designated in an instruction into a physical register number. We note that Appellants' claim 10 recites that the register number conversion circuit converts a logical register number designated in an instruction into a physical register number, said logical register number indicating the queue number, the physical register having a physical register number belonging to the queue

having the logical register number, and transfers said physical register number to said plurality of register queues. In our review of Hattori, we also fail to find that Hattori teaches the above specific limitation as recited in claim 10. Furthermore, we fail to find any suggestion of making a modification to Sakuma or Hattori to obtain the Appellants' invention.

We have not sustained the rejection of claims 3, 4 and 11 through 13 under 35 U.S.C. § 112, second paragraph.

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Further-more we have not sustained the rejection of claim 1 under 35 U.S.C. § 102, nor have we sustained the rejection of claims 10 and 11 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

REVERSED

	JAMES D. THOMAS)	
	Administrative Patent Judge)	
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)	
)	BOARD OF
PATENT)	
	MICHAEL R. FLEMING)	APPEALS AND
	Administrative Patent Judge)	
INTERFERENCES)	
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)	
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