

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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***Ex parte*** CHRISTOPHER A. HAJDU and DARRYL R. POLK

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Appeal No. 96-1246  
Application No. 08/205,812<sup>1</sup>

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ON BRIEF

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Before URYNOWICZ, HAIRSTON, and FLEMING, ***Administrative Patent Judges.***

FLEMING, ***Administrative Patent Judge.***

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<sup>1</sup> Application for patent filed March 3, 1994. According to appellants, this application is a continuation of Application No. 07/920,950, filed July 28, 1992, now abandoned.

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**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1, 2, 12 through 15 and 17 through 20. Claims 3 through 11 and 16 have been canceled.

The invention relates to digitally filtering stereo data to increase the quality of the audio information in an efficient manner.

Independent claim 1 is reproduced as follows:

1. An apparatus for recursively filtering in parallel digital audio information, comprising:
  - (a) means for receiving digital audio information, having a first set of digital signals for a first channel and a second set of digital signals for a second channel;
  - (b) means for receiving filter coefficients;
  - (c) means for recursively filtering the audio information connected to said means for receiving digital audio information and said means for receiving filter coefficients, said means for recursively filtering including means for mathematically applying said coefficients to said first and second sets of digital signals in parallel with said means for receiving filter coefficients; and
  - (d) means for storing the filtered audio information.

The references relied on by the Examiner are as follows:

Sakamoto et al. (Sakamoto)	4,507,728	Mar. 26,
1985		

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Fukuda  
1993

5,216,718

Jun. 1,

The specification is objected to under 35 U.S.C. § 112, first paragraph, for failing to provide an adequate written description of the invention. Claims 1, 2, and 12 through 15 and 17 through 20 stand rejected for the reasons set forth in the objection to the specification. Claim 19 stands rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claims 1, 2, and 12 through 15 stand rejected under 35 U.S.C. § 102 as being anticipated by Fukuda. Claims 17 through 20 stand rejected under 35 U.S.C. § 102 as being anticipated by Sakamoto.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the brief and the answer for the details thereof.

**OPINION**

After a careful review of the evidence before us, we do not agree with the Examiner that claims 1, 2, 12 through 15

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and 17 through 20 are properly rejected under 35 U.S.C. § 112 or are properly rejected under 35 U.S.C. § 102 as being anticipated by the applied references.

The Examiner objects to the specification on the basis of written description and then argues that the specification is not enabling. Our reviewing court has made it clear that written description and enablement are separate requirements under the first paragraph of 35 U.S.C. § 112. **Vas-Cath Inc. v. Mahurkar**, 935 F.2d 1555, 1560, 19 USPQ2d 1111, 1114 (Fed. Cir. 1991). Thus, we will treat these two issues separately.

"The function of the description requirement [of the first paragraph of 35 U.S.C. 112] is to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." **In re Wertheim**, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). "It is not necessary that the application describe the claim limitations exactly, . . . but only so clearly that persons of ordinary skill in the art will recognize from the disclosure that appellants invented

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processes including those limitations." *Wertheim*, 541 F.2d at 262, 191 USPQ at 96 *citing In re Smythe*, 480 F.2d 1376, 1382, 178 USPQ 279, 284 (CCPA 1973). Furthermore, the Federal Circuit points out that "[i]t is not necessary that the claimed subject matter be described identically, but the disclosure originally filed must convey to those skilled in the art that applicant had invented the subject matter later claimed." *In re Wilder*, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 1209 (1985), *citing In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

The Examiner has not shown that the inventor did not have possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him. Thus, we will not sustain the rejection on the basis of written description.

In order to comply with the enablement provision of 35 U.S.C. § 112, first paragraph, the disclosure must adequately describe the claimed invention so that the artisan could practice it without undue experimentation. *In re*

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**Scarborough**, 500 F.2d 560, 565, 182 USPQ 298, 302 (CCPA 1974); **In re Brandstadter**, 484 F.2d 1395, 1405-06, 179 USPQ 286, 294 (CCPA 1973); and **In re Gay**, 309 F.2d 769, 772, 135 USPQ 311, 315 (CCPA 1962). If the Examiner had a reasonable basis for questioning the sufficiency of the disclosure, the burden shifted to the Appellant to come forward with evidence to rebut this challenge. **In re Doyle**, 482 F.2d 1385, 1392, 179 USPQ 227, 232 (CCPA 1973), **cert. denied**, 416 U.S. 935 (1974); **In re Brown**, 477 F.2d 946, 950, 177 USPQ 691, 694 (CCPA 1973); and **In re Ghiron**, 442 F.2d 985, 991, 169 USPQ 723, 728 (CCPA 1971). However, the burden was initially upon the Examiner to establish a reasonable basis for questioning the adequacy of the disclosure. **In re Strahilevitz**, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982); **In re Angstadt**, 537 F.2d 498, 502, 190 USPQ 214, 218 (CCPA 1976); and **In re Armbruster**, 512 F.2d 676, 677, 185 USPQ 152, 153 (CCPA 1975).

The Examiner argues that the specification fails to disclose any structure of a device in a meaningful degree of specificity to enable a person of ordinary skill in the art to

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implement the equations shown in Figures 3 through 10 in parallel. On pages 9 and 10 of the brief, Appellants point to pages 8 through 11 of the specification which describe in detail a device for implementing execution of instruction in parallel. Appellants further point to page 6 of the specification which discloses that a commercially available processor, Texas Instruments TMS 320, is capable of implementing the invention.

Upon a careful review of the specification, we find that the Examiner did not have a reasonable basis for questioning the sufficiency of the disclosure, and thereby the burden did not shift to the Appellants to come forward with evidence to rebut this challenge. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 112, first paragraph.

Claim 19 stands rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Analysis of 35 U.S.C. § 112, second paragraph, should begin with the determination of whether the claims set out and circumscribe a particular area with a reasonable degree of precision and particularity; it is here where

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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 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) and *In re Borkowski*, 422 F.2d 904, 909, 164 USPQ 642, 645-46 (CCPA 1970).

On page 4 of the answer, the Examiner states that claim 19 is indefinite because it is not clear what is meant by the claimed limitation, "the multiplication to apply a five pole digital filter to the one or more digital signals." Appellants argue on page 12 of the brief that the language particularly points out and distinctly claims the Appellants' invention when read in light of Appellants' specification.

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On page 6 of the specification, we note Appellants disclose that the "mathematical equations which constitute a five pole recursive digital filter for right and left channel stereo processing are shown in Figure 3." Claim 19 recites "wherein the filter coefficients are selected to cause the multiplication to apply a five pole digital filter to the one or more digital signals." Thus, the claim is requiring that a five pole recursive digital filter implemented by calculating the equations shown in Figure 3 be applied to the digital signals. In reviewing the specification as well as Appellants' claimed language, we find that claim 19 sets out and circumscribes the invention with a reasonable degree of precision and particularity in light of teachings of the disclosure as it would be interpreted by one possessing ordinary skill in the art. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 112, second paragraph.

Claims 1, 2, and 12 through 15 stand rejected under 35 U.S.C. § 102 as being anticipated by Fukuda. Claims 17 through 20 stand rejected under 35 U.S.C. § 102 as being anticipated by Sakamoto.

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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, 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).

In regard to the rejection of claims 1, 2, and 12 through 15 as being anticipated by Fukuda, Appellants argue on pages 15 and 16 of the brief that Fukuda fails to teach the Appellants' claimed limitations as required under 35 U.S.C. § 102. In particular, Appellants argue that Fukuda does not teach or suggest means for parallel processing between filter application and coefficient and data signal loading as recited in Appellants' claims 1 and 2. Appellants further argue that Fukuda does not teach or suggest the means for overlapping instruction execution and digital signal and coefficient loading as recited in Appellants' claims 12 through 15.

Upon a careful review of Fukuda, we fail to find that Fukuda teaches a "means for recursively filtering the audio

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information . . . including means for mathematically applying said coefficients to said first and second sets of digital signals in parallel with said means for receiving filter coefficients" as recited in Appellants' claim 1. Furthermore, we fail to find that Fukuda teaches a "one multiplication and one logic processing means . . . , said processing means overlapping instruction processing for said two or more channels of digital signals" as recited in Appellants' claim 12.

In regard to the rejection of claims 17 through 20 as being anticipated by Sakamoto, Appellants argue on pages 13 through 15 of the brief that Sakamoto fails to teach all of the claimed limitations. In particular, Appellants argue that Sakamoto does not teach or suggest executing a multiplication while loading another filter coefficient in the same processor cycle.

Upon a careful review of Sakamoto, we fail to find that Sakamoto teaches the method step of "multiplying two values selected from said filter coefficients, said digital signals or an intermediate result in said processor means which in the same processor cycle loading another filter coefficient or

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digital signal into said processor means" as recited in  
Appellants'

claim 17. Therefore, we will not sustain the Examiner's  
rejections under 35 U.S.C. § 102.

In view of the foregoing, the decision of the Examiner  
rejecting claims 1, 2, and 12 through 15 and 17 through 20 is  
reversed.

**REVERSED**

STANLEY M. URYNOWICZ	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
KENNETH W. HAIRSTON	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
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MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	

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Mark S. Walker  
IBM Corporation  
Intellectual Prop. Law Dept., 932  
11400 Burnet Road, ZIP 4054  
Austin, TX 78758

# ***Shereece***

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APJ FLEMING

APJ HAIRSTON

APJ URYNOWICZ

REVERSED

Prepared: August 13, 1999