

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAMES R. PETERSON

Appeal No. 1999-0263
Application No. 08/517,902

ON BRIEF

Before KRASS, RUGGIERO and DIXON, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-26, all of the claims pending.

The invention is directed to computer methods and apparatus for computing reciprocals and performing divide operations. More particularly, an estimated reciprocal

term is looked up in a first lookup table, wherein the estimated reciprocal term corresponds to a first portion of the operand, an error term is looked up in a second lookup table, wherein the error term corresponds to a second portion of the operand, and the reciprocal is generated from the estimated reciprocal term and the error term.

Representative independent claim 1 is reproduced as follows:

1. A method of computing a reciprocal of an operand comprising the steps of:
 - a) looking up an estimated reciprocal term in a first lookup table, wherein the estimated reciprocal term corresponds to at least a first portion of the operand;
 - b) looking up an error term in a second lookup table, wherein the error term corresponds to at least a second portion of the operand; and
 - c) generating the reciprocal from the estimated reciprocal term and the error term.

The examiner relies on the following reference:

Yamaguchi

5,012,438

Apr. 30, 1991

Appeal No. 1999-0263
Application No. 08/517,902

Claims 1-26 stand rejected under 35 U.S.C. ' 102(b) as being anticipated by Yamaguchi.¹

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

We reverse.

A prior art reference anticipates the subject matter of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently. See Hazani v. U.S. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Yamaguchi is clearly directed to subject matter which is similar to that claimed and solves a similar problem of reducing the memory capacity used by a reciprocal

¹The answer, at page 4, indicates that the rejection is "based upon a public use or sale of the invention Yamaguchi" Based on the explanation of the rejection and the arguments in both the briefs and answer, it is clear that the rejection is based on an anticipation of the claimed subject matter by Yamaguchi and not, in any way, on a "public use or sale."

arithmetic circuit with a ROM table. However, Yamaguchi appears to solve the problem in a manner somewhat differently than does the instant claimed invention.

Yamaguchi is apparently interested in looking up the reciprocal of the square of the upper-bit data AH of a divisor A rather than looking up the actual estimated reciprocal term in a first lookup table, as claimed. Also, Yamaguchi does not appear to employ a second lookup table for looking up an error term, as is also claimed.

The examiner relies on Figure 14 and columns 9-11 of Yamaguchi for the teaching of the elements of the instant independent claims, identifying, at page 4 of the answer, various lines in these columns. However, the examiner does not particularly point out exactly what portions of the Yamaguchi disclosure are alleged to correspond to the instant claimed elements.

Apparently, the examiner is alleging that Yamaguchi's ROM 51 corresponds to the claimed second lookup table and that ROM 52 would correspond to the claimed first lookup table. But, if this is the case, the examiner's allegations are not borne out by the disclosure of

Appeal No. 1999-0263
Application No. 08/517,902

Yamaguchi. The error term in Yamaguchi which corresponds to the claimed error term would appear to be D while the estimated reciprocal term in Yamaguchi would appear to be R_i . Yet, Figure 14 of Yamaguchi shows that D is not part of the table 51; nor is R_i part of the table 52. Thus, there does not appear to be any correspondence between the claimed estimated reciprocal terms or error terms and the ROMs of Yamaguchi.

The examiner's response to appellant's arguments, at pages 5-6 of the answer, fails to elucidate on the general allegations made by the examiner in the statement of the rejection. Accordingly, they are of little help to us in understanding exactly what the examiner considers to be the elements in Yamaguchi which correspond to the claimed elements. Therefore, we find no prima facie case of anticipation established by the examiner.

Appeal No. 1999-0263
Application No. 08/517,902

BLAKELY, SOKOLOFF, TAYLOR
AND ZAFMAN
12400 WILSHIRE BLVD.
7TH FLR.
LOS ANGELES, CA 90025

EAK/dal