

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAKASHI SHIOIRI

Appeal No. 1998-0745
Application 08/216,842¹

ON BRIEF

Before URYNOWICZ, THOMAS and FLEMING, Administrative Patent Judges.

URYNOWICZ, Administrative Patent Judge.

Decision on Appeal

This appeal is from the final rejection of claims 8-10 and 12-14, all the claims pending in the application.

The invention pertains to a medical image processor. Claim 8, the sole independent claim, is illustrative and reads as follows:

8. A medical image processor for correlating and analyzing at least two comparison images, comprising:

¹ Application for patent filed March 24, 1994.

means for substantially simultaneously displaying said two comparison images;

means for setting at least one reference point in one of the images;

means for setting a correlation detection area related to said at least one reference point in the other image;

means for obtaining and calculating a degree of correlation between image information of said at least one reference point and image information of each point in said detection area;

means for displaying a plurality of numerical values representing the degree of correlation in a rectangular correlation table, the plurality of said numerical values being arranged in a one-to-one correspondence with respect to each point in the detection area;

image movement means for relatively moving said two comparison images so that the image information of said at least one reference point coincides with image information of a corresponding point represented by a maximum numerical value in said correlation table, said means for obtaining and calculating a degree of correlation and said image movement means being operable alternately and repeatedly; and

decision means for deciding a coincidence between the image information of said reference point and the image information of the corresponding point.

The references relied upon by the examiner as evidence of obviousness are:

Mayer et al. (Mayer)	4,404,590	Sep. 13,
		1983

Verdooner et al. (Verdooner)	5,220,360	Jun. 15,
		1993

Claims 8-10 and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Verdooner.

Appeal No. 1998-0745
Application 08/216,842

Claims 13 and 14 stand rejected under 35 U.S.C. § 103 as unpatentable over Verdooner in view of Mayer.

The respective positions of the examiner and the appellant with regard to the propriety of these rejections are set forth in the final rejection (Paper No. 12) and the examiner's answer and supplemental answer (Paper Nos. 19 and 22) and the appellant's brief and reply brief (Paper No. 18 and 20).

Opinion

After consideration of the positions and arguments presented by both the examiner and the appellant, we have concluded that the rejections should not be sustained.

With respect to sole independent claim 8, the examiner acknowledges in the answer that Verdooner does not teach that images are aligned based on the maximum numerical value in a correlation table. The observation is made that images are aligned according to matching landmarks (reference points) and the conclusion is made that it would have been obvious to one of ordinary skill in the art to align the images according to the points of greatest

Appeal No. 1998-0745
Application 08/216,842

correlation in order to ensure that the corresponding features were being compared in the two images.

We disagree with the examiner's analysis. The correlation table relied on by the examiner is illustrated in Figure 9 of Verdooner. This table relates to image comparison after images have been aligned and represents changes in a patient from previous visits. Unlike appellant, the correlation table is not used to

align images and there is no showing why it would have been obvious

to modify the reference to utilize a correlation table formed in the manner defined in claim 8 to align images.

The examiner has provided no convincing rationale as to why it would have been obvious to use a correlation table such that image movement means moves two images so that "image information of said at least one reference point coincides with image information of a corresponding point represented by a maximum numerical value in the correlation table". The fact that it was well known to perform various types of processing on image data (answer at page 7) does not establish that appellant's invention

Appeal No. 1998-0745
Application 08/216,842

would have been obvious over Verdooner. Verdooner moves images relative to each other utilizing correlated landmarks or reference points on the images in order to ensure that corresponding features were being compared in the images, but there is no evidence that the specific processing (image movement for alignment of images) claimed by appellant utilizing a correlation table was known in the prior art.

Whereas we will not sustain the rejection of claim 8, the sole independent claim, as obvious over Verdooner, we will not sustain the rejection of dependent claims 9, 10 and 12 as obvious over Verdooner

or the rejection of claims 13 and 14 as obvious over Verdooner in view of Mayer.

REVERSED

Appeal No. 1998-0745
Application 08/216,842

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