

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board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. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte RONALD E. JODOIN,  
ROBERT P. LOCE and  
REINER ESCHBACH

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Appeal No. 2000-0238  
Application 08/342,283

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ON BRIEF

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Before THOMAS, JERRY SMITH and GROSS, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the Board from the examiner's final rejection of claims 15-18, 20 and 21. The examiner has allowed claim 5, and pages 1 and 2 of the Answer indicate that the examiner has withdrawn an outstanding rejection under 35 U.S.C.

§ 103 of claims 1, 3, 4, 6, 7, 9-14, 22 and 24. Appellants' amendment filed on June 4, 2001, canceled these latter claims in

favor of a divisional application; this amendment was entered according to the examiner's communication mailed on September 6, 2001.

Claim 15 is reproduced below:

15. An apparatus for processing binary image pixels in an image represented by a plurality of rasters of binary image pixels, each representing the binary state of a single pixel within the image, to identify regions exhibiting a particular, unique binary pixel structure therein, comprising:

an image source for producing a document image having a plurality of binary image pixels therein, each pixel represented by a binary density signal;

memory for storing at least a portion of the binary density signals representing a region of the document image in a data buffer; and

a segmentation circuit employing template-matching filters to identify the presence of the particular, unique binary pixel structure in the region of the image stored in said memory, the segmentation circuit further comprising a logic filter for removing the particular, unique binary pixel structure from the region of the image stored in said memory to produce an output image substantially void of the particular, unique binary pixel structure.

The following reference is relied on by the examiner:

|                              |           |      |
|------------------------------|-----------|------|
| Matsunawa et al. (Matsunawa) | 4,741,046 | Apr. |
| 26, 1988                     |           |      |

Claims 15-18, 20 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Matsunawa.

Rather than repeat the positions of the appellants and the examiner, reference is made to the brief and the answer for the respective details thereof.

#### OPINION

We reverse.

Even though we reverse the outstanding rejection as a whole, we do agree with the examiner's position that the use of the various patterns of blocks depicted in Figure 11, with examples given in Figures 12 and 13, do teach a segmentation circuit employing template-matching filters to identify unique pixel structures.

Since the reference does discuss Figure 11 in the paragraph bridging columns 5-6, the block sorting operation associated with Figure 11 clearly is undertaken based upon the 16 foreground patterns in Figure 11 that have been prepared beforehand. This sorting operation is equivalent to the template matching function of the segmentation circuit claimed.

However, we part company with the examiner's views that the feature of the segmentation circuit further comprising "a logic filter for removing the particular, unique binary pixel structure from the region of the image stored in said memory to produce an

output image substantially void of the particular, unique binary pixel structure" is disclosed or otherwise taught in Matsunawa. This removing operation of independent claim 15 on appeal is consistent with the showing disclosed in Figures 2 and 3.

As to Matsunawa, this reference continually discusses its ability to discriminate, sort and extract patterns of information from an original image or picture. Although these terms are used in the reference to describe in effect an identification operation in accordance with the subject matter of claim 15 on appeal, each of them falls short of actually removing an identified region to produce an output image substantially void of that region. In other words, no discriminated, sorted or extracted region is removed according to the teachings of Matsunawa. The identifiable character information in regions 1 and 2 and the identified continuous tone information in regions 3 and 4 of the original picture in Figure 14 remain in the pattern sorted picture version in Figure 15 as well as in the resulting picture of the extracted regions in Figure 16.

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Therefore, the decision of the examiner rejecting independent claim 15 and its respective dependent claims 16-18, 20 and 21 is reversed.

REVERSED

|                             |   |                 |
|-----------------------------|---|-----------------|
| James D. Thomas             | ) |                 |
| Administrative Patent Judge | ) |                 |
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|                             | ) |                 |
|                             | ) |                 |
| Jerry Smith                 | ) | BOARD OF PATENT |
| Administrative Patent Judge | ) | APPEALS AND     |
|                             | ) | INTERFERENCES   |
|                             | ) |                 |
|                             | ) |                 |
| Anita Pellman Gross         | ) |                 |
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