

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte DAVID L. HECHT, RICHARD G. STEARNS,  
and L. NOAH FLORES

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Appeal No. 97-0271  
Application No. 08/186,212<sup>1</sup>

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ON BRIEF

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

GROSS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 5, which are all of the claims pending in this application.

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<sup>1</sup> Application for patent filed January 25, 1994. According to appellants, this application is a continuation of Application No. 07/814,842, filed December 27, 1991, now abandoned.

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The appellants' invention relates to a self-clocking glyph code, each glyph having plural graphical characteristics each of which has plural graphical states. Further, all of the glyphs have a substantially uniform size. Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A self-clocking glyph code for transferring multi-bit digital values back and forth between an electronic domain and a hardcopy domain, said code comprising

a logically ordered sequence of mutually independent glyphs that are written on said recording medium in accordance with a predetermined spatial formatting rule, said glyphs all being of substantially uniform size;

each of said glyphs having a plurality of predetermined, discriminable graphical characteristics; and each of said graphical characteristics having a plurality of predetermined, discriminable graphical states;

said multi-bit digital values being distributively encoded in a predetermined logical order in the states of the graphical characteristics of respective ones of said glyphs, whereby each of said digital values is encoded as a plurality of logically ordered bit strings.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:<sup>2</sup>

Sanford

4,443,694

Apr. 17, 1984

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<sup>2</sup> Sugita, JP 63-254586, published October 21, 1988, was cited in the prior art section of the Examiner's Answer but was not applied in any rejections.

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| Bloomberg (Bloomberg I)                   | 5,091,966                 | Feb. 25, 1992<br>(filed Jul. 31, 1990) |
| Bloomberg (Bloomberg II)                  | 5,168,147                 | Dec. 01, 1992<br>filed Jul. 31, 1990)  |
| Miyanaga<br>(Japanese patent application) | JP 60-129891 <sup>3</sup> | Jul. 11, 1985                          |

M. Mansour, IBM Technical Disclosure Bulletin, Vol. 26, no. 2, 766-67 (July 1983)

Claims 1 through 3 and 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mansour in view of Sanford.

Claims 1 and 3 through 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mansour in view of Miyanaga.

Reference is made to the Examiner's Answer (Paper No. 20, mailed May 28, 1996) and the Supplemental Examiner's Answer (Paper No. 22, mailed July 24, 1996) for the examiner's reasoning in support of the rejections, and to the appellants' Brief (Paper No. 19, filed April 29, 1996) and Reply Brief (Paper No. 21, filed July 2, 1996) for the appellants' arguments thereagainst.

#### OPINION

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<sup>3</sup> Our understanding of this reference and of Sugita is based upon translations provided by the Scientific and Technical Information Center of the Patent and Trademark Office. A copy of the translation for each reference is enclosed with this decision.

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As a preliminary matter we note that the examiner refers (Answer, page 5) to "[t]he Bloomberg patents" as being included in the rejection. However, the statement of the rejection in the Answer includes only Mansour, Sanford, and Miyanaga. Further-more, the examiner fails to explain how he intends to apply the teachings of Bloomberg to the combination of Mansour and Sanford or Miyanaga. Accordingly, we do not consider Bloomberg as part of the rejection before us.

We have carefully considered the claims, the applied prior art references, and the respective positions articulated by the appellants and the examiner. As a consequence of our review, we will reverse the obviousness rejections of claims 1 through 5.

Claim 1 recites, "said glyphs all being of substantially uniform size" with "each of said glyphs having a plurality of predetermined, discriminable graphical characteristics." The rejection combines Mansour with Sanford or Miyanaga. Mansour shows multi-height glyphs, which clearly are not of substantially uniform size. As pointed out by appellants (Appeal Brief,

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page 5), Mansour's plural heights are "[i]n direct contradiction to the express limitation of Claim 1 which calls for 'said glyphs all being of substantially uniform size' (emphasis supplied)." For higher density, Sanford teaches using plural levels of darkness and Miyanaga discloses using plural colors. However, neither Sanford nor Miyanaga cures the deficiency of Mansour of having multiple heights. The examiner's only response to appellants' argument is (Answer, page 5) that "[t]he Bloomberg patents (see figs. 3, 3A, 3B) were later included in the rejection combination to teach 'same size' 'glyphs' as argued." However, as noted above, the statement of the rejection before us does not include Bloomberg. Therefore, Bloomberg cannot remedy the defect in the rejection. Consequently, we cannot sustain the rejection.

Should further prosecution take place before the examiner,<sup>4</sup> we urge the examiner to consider anew the disclosures of the Bloomberg patents. For example, Bloomberg II clearly teaches a sequence of self-clocking glyph codes

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<sup>4</sup> The examiner is reminded that for any rejection the examiner may decide to pursue, a complete explanation of the reasoning behind it is required.

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(column 6, lines 17-20), with the glyphs being of uniform size (Figure 3), and with the rotation determining the bit value (Figure 3 and column 6, lines 41-52). However, further investigation is required as to whether Bloomberg II can be considered to disclose "a plurality of predetermined, discriminable graphical characteristics," with a first being glyph rotation and a second being grayscale, particularly in light of column 5, lines 29-34, which states:

Although the following description focuses on applications in which the scanner **25** is a black-and-white scanner for converting the pixels of the scanned-in image into single bit digital values (i.e., "1" or "0"), it will be understood that it could be a gray-scale scanner for converting the pixels into multi-bit values.

The examiner should also note the suggestion in Sugita to superimpose multiple types of information to record a large amount of information (page 5 of the translation), and to make the pieces of information independently readable such as by using inks of different wavelengths (page 6 of the translation).

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CONCLUSION

The decision of the examiner rejecting claims 1 through 3 and 5 under 35 U.S.C. § 103 is reversed. The decision of the examiner rejecting claims 1 and 3 through 5 under 35 U.S.C. § 103 is reversed.

REVERSED

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| KENNETH W. HAIRSTON         | ) |                 |
| Administrative Patent Judge | ) |                 |
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|                             | ) | BOARD OF PATENT |
| JERRY SMITH                 | ) | APPEALS         |
| Administrative Patent Judge | ) | AND             |
|                             | ) | INTERFERENCES   |
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| ANITA PELLMAN GROSS         | ) |                 |
| Administrative Patent Judge | ) |                 |

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