Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte STEVEN J. HARRINGTON

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Appeal No. 1999-0484
Application No. 08/554,395

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ON BRIEF

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Before JERRY SMITH, BARRY, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-7 and 10-21.

We reverse.

BACKGROUND

The invention is directed to a method and apparatus for locating and coloring boundaries of image elements, to produce a continuous color boundary and to preserve edge detail of the image element. Claim 1 is reproduced below.

> 1. A method for mapping an original color of an image element boundary, the image element comprising a plurality of pixels, where a subset of the plurality of pixels located around the periphery of the image element form the image element boundary, each pixel in the image element being defined by a plurality of color separations, and where the image element is nominally rendered by a halftoning process so as to represent the image element as a plurality of original color marks spaced apart from one another, wherein the method maps the original color of the image element to a solid color that appears continuous when reproduced, comprising the steps of:
>
> locating a section of the image element boundary that would nominally be rendered by a halftoning process as a plurality of original color marks spaced apart from one another along the boundary;
>
> determining whether the image element boundary section located in said locating step is comprised of true boundary pixels of the color image; and
>
> mapping, in response to a determination that the image element boundary section is comprised of true boundary pixels, the color separation of the image element boundary section to produce a solid color along at least the image element boundary section so as to produce a continuous color boundary and to preserve edge detail of the image element being rendered.

The examiner relies on the following references:

Suzuki	5,134,667	Jul. 28, 1992
Spaulding et al. (Spaulding)	5,377,041	Dec. 27, 1994

Claims 10 and 13 stand rejected under 35 U.S.C. § 102 as being anticipated by Suzuki.

Claims 1-6, 11, and 14-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Suzuki.

Claims 7, 12, and 18-21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Suzuki and Spaulding.

Claims 8 and 9 have been allowed.

We refer to the Final Rejection (mailed Sep. 3, 1997) and the Examiner's Answer (mailed May 27, 1998) for a statement of the examiner's position and to the Brief (filed Feb. 5, 1998) and the Reply Brief (filed Jul. 27, 1998) for appellant's position with respect to the claims which stand rejected.

OPINION

Responsive to the section 102 rejection of claims 10 and 13 as being anticipated by Suzuki, appellant (Brief at 13-14) challenges the examiner's finding that the reference discloses calculating a difference value for each color separation defining the boundary pixel and the companion pixel, as set forth in claim 10. In particular, appellant's position is that Suzuki discloses measuring differences in distances, rather than color separation values, in the section of the reference upon which the rejection relies.

The examiner responds that Suzuki "clearly teaches the difference value of claim 10 to represent color density values," and points to column 25, lines 33 through 36 of the reference. With the section viewed in context of the specifics described in columns 24 and

25 of Suzuki, however, we agree with appellant. Suzuki, especially at column 24, lines 33 through 49 and column 25, lines 6 through 32, makes clear that distances between adjacent edges in an image area are measured. We find no disclosure of calculating a difference value for each color separation defining the boundary pixel and the companion pixel, as required by instant claim 10.

We also agree with appellant that Suzuki fails to disclose maximizing the larger of the color separation values defining the true boundary pixels, which is another requirement of claim 10. Suzuki does disclose detecting maximum and minimum values of the process colors (e.g., col. 9, ll. 39-44). However, we do not find any disclosure of the step of maximizing the larger of the color separation values defining the true boundary pixels.

We therefore cannot sustain the section 102 rejection of claim 10. Appellant, in the Reply Brief, asserts that claim 13 distinguishes over Suzuki because the reference fails to disclose a means for mapping a color separation of the image element boundary section to a solid color, so as to produce a continuous color boundary. The statement of the rejection does not appear to point out where such a mapping means is thought to be disclosed in Suzuki.

We note that instant claim 1, although drawn to a process rather than an apparatus, recites a limitation of similar scope: mapping the color separation of the image element boundary section to produce a solid color so as to produce a continuous color boundary. In the section 103 rejection of claims 1-6, 11, and 14-17 over Suzuki, the rejection does not

point out a mapping step as detailed in claim 1, but submits that it would have been obvious to emphasize boundaries with a solid color.

In the Answer's response to appellant's arguments presented in the Brief, the examiner appears to shift position and states that "the recitation of mapping the color separation of the boundary section to produce a solid color has not been given patentable weight because the recitation occurs in the preamble." While claims 1 and 13 refer to the mapping in the respective preambles, we do not find any disclosure or suggestion of the clear requirements set forth in the body of the claims with regard to mapping the color separation, as argued by appellant on page 16 of the Brief.

The allocation of burdens requires that the USPTO produce the factual basis for its rejection of an application under 35 U.S.C. § § 102 and 103. In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (citing In re Warner, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)). The one who bears the initial burden of presenting a prima facie case of unpatentability is the examiner. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Since the argued limitations of claims 1 and 13 have not been shown to be disclosed or suggested by Suzuki, we cannot sustain the section 102 rejection of claim 13, nor the section 103 rejection of claim 1. Nor can we sustain the rejection of dependent claims 2-6, depending from claim 1, or dependent claims 14-17, depending from claim 13. The rejection of instant claim 11, included in the section 103 rejection over Suzuki, also cannot be sustained, for the reason

that all the requirements of base claim 10 have not been established as disclosed or suggested by the teachings of the reference.

We also do not sustain the section 103 rejection of dependent claims 7, 12, and 18-21 as being unpatentable over Suzuki and Spaulding. Spaulding is applied for the teaching of quantizing color separation. However, the reference does not remedy the deficiencies we have determined in the rejections applied against the base claims 1, 10, and 13.

We note that the rejection of instant claims 20 and 21 appears to rely on a "Xerox Color Encoding Standard Manual," which the Answer fails to formally cite as a reference. However, at least to the extent the alleged reference is applied against the claims, the manual also fails to remedy the basic deficiencies of the Suzuki reference.

In summary, because all the requirements of each of base claims 1, 10, and 13 have not been established as being disclosed or suggested by the prior art, we do not sustain the rejection of any of the claims on appeal.

CONCLUSION

The rejection of claims 1-7 and 10-21 is reversed.

REVERSED

JERRY SMITH Administrative Patent Judge	)
LANCE LEONARD BARRY Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
HOWARD B. BLANKENSHIP Administrative Patent Judge	)

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