

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 13

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHIEN-CHIH LIN

Appeal No. 1999-0486
Application No. 08/633,389

ON BRIEF

Before KRASS, DIXON, 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 1-5 and 8-12, which are all the claims remaining in the application.

We reverse, and enter new grounds of rejection in accordance with 37 CFR § 1.196(b).

BACKGROUND

The invention is directed to an image scanner which compensates for instability of the scanner light source. Claim 1 is reproduced below.

1. An image scanner for scanning a document comprising:
 - (1) a test region;
 - (2) a light source for illuminating the document and the test region;
 - (3) optical means for conveying the light reflected from the document and the test region;
 - (4) a line image sensor for receiving the light from the optical means and generating an image signal corresponding to the light reflected from the document and a brightness signal corresponding to the light reflected from the test region; the line image sensor comprising an array of (red, green, blue) (R,G,B) sensing elements for converting the light received from the optical means into an array of corresponding (R,G,B) signals wherein both the image signal and the brightness signals generated by the line image sensor are formed by an array of (R,G,B) signals; and
 - (5) a signal compensation circuit for amplifying the image signal according to the brightness signal to compensate the instability of the light source; the signal compensation circuit comprising an A/D converter for digitizing the (R,G,B) signals of the image signal and the brightness signal, and a digital processor for adjusting the digitized (R,G,B) signals of the image signal according to the digitized (R,G,B) signals of the brightness signal.

The examiner relies on the following references:

Ito et al. (Ito)	5,151,796	Sep. 29, 1992
Webb et al. (Webb)	5,278,674	Jan. 11, 1994
Nakakuki	5,587,746	Dec. 24, 1996 (filed Jun. 22, 1995)

Claims 1-4 and 8-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Webb and Nakakuki.

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Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over Webb, Nakakuki, and Ito.

We refer to the Final Rejection (mailed Dec. 8, 1997) and the Examiner's Answer (mailed Sep. 17, 1998) for a statement of the examiner's position and to the Brief (filed May 15, 1998) for appellant's position with respect to the claims which stand rejected.

OPINION

Section 103 rejections

Appellant argues (Brief at 3-5) that the combination of Webb and Nakakuki fails to disclose or suggest the language of claim 1 with respect to "a digital processor for adjusting the digitized (R,G,B) signals of the image signal according to the digitized (R,G,B) signals of the brightness signal," the brightness signal "corresponding to the light reflected from the test region."

We agree with appellant that the rejection is unclear with respect to the specific teachings of Nakakuki relied upon. In particular, the allegations with regard to "adjusting the digitized R, G, B signals of the image signal in accordance with the digitized brightness R, G, B signals" (Answer at 3), or "digitizing the color signals in accordance with the brightness signals" (Answer at 6), do not appear to speak to the requirements of claim 1.

In view of the sections of Nakakuki pointed out in the rejection, it appears most likely that the description of the white balance adjustment circuit 2 (Fig. 1), or the white

balance adjustment circuit 13 (Fig. 3), is deemed to teach the limitations of claim 1 at issue. The reference describes analog circuitry for encoding a composite video signal. The white balance adjustment circuit 2 (Fig. 1) "is adapted to provide a gain inherent in the respective one of the color component signals (R, G and B) to equalize the average level of each of the color component signals (R, G and B) such that the white color of a white-colored object can be reproduced on a reproduced scene." Nakakuki at col. 1, ll. 29-34. The digital version of the white balance adjustment circuit is described at column 3, line 42 et seq. of the reference.

However, we do not find equalizing the average level of each of the color component signals suggestive of the claim 1 requirement of adjusting the digitized signals of the image signal according to digitized signals corresponding to the light reflected from a test region. In view of the text following the description of the white balance adjustment circuits, Nakakuki serves as evidence that the artisan was familiar with the use of a brightness signal in the encoding of composite video signals. However, we do not find suggestion for the proposed combination in the objective teachings of the prior art, as represented by Webb and Nakakuki.

Moreover, Webb discloses adjusting effective light levels based on a brightness signal corresponding to light reflected from a test region. Webb's solution (Figs. 5 and 9) is to effect control of the light source levels and, potentially, to modify parameters of the A/D converter. Even if the teachings, combined with Nakakuki, may have suggested use of a line sensor having an array of R, G, B sensing elements, and

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digitizing the R, G, B signals of the image signal and the brightness signal, we do not see any objective suggestion from the prior art for changing the feedback control that is taught by Webb, and thus no suggestion for the “digital processor” as claimed.

We therefore cannot sustain the section 103 rejection of claims 1-4 and 8-12 as being unpatentable over Webb and Nakakuki. Since Ito as applied fails to remedy the deficiencies with respect to the basic combination of Webb and Nakakuki, we also do not sustain the section 103 rejection of claim 5 as being unpatentable over the combination of Webb, Nakakuki, and Ito. We do, however, enter new grounds of rejection against claim 5, below.

New Grounds of Rejection -- 37 CFR § 1.196(b)

We enter the following new grounds of rejection against the claims in accordance with 37 CFR § 1.196(b): claim 5 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention, or, in the alternative, under 35 U.S.C. § 112, first paragraph, as the disclosure fails to provide written description for the invention now claimed.

The function of claims is (1) to point out what the invention is in such a way as to distinguish it from the prior art; and (2) to define the scope of protection afforded by the patent. In re Vamco Mach., Inc., 752 F.2d 1564, 1577 n.5, 224 USPQ 617, 635 n.5 (Fed. Cir. 1985). The legal standard for definiteness is whether a claim reasonably

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apprises those of skill in the art of its scope. In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). The inquiry is merely to determine whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). The definiteness of the language employed must be analyzed -- not in a vacuum, but in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. Id.

Instant claim 1 sets forth “a signal compensation circuit...comprising an A/D converter...and a digital processor for adjusting the digitized (R,G,B) signals...” Claim 5, which depends from 1, recites “wherein the signal compensation circuit comprises” an A/D converter, a sampling circuit, and a brightness compensation circuit. Claim 5 is unclear with respect to whether the “signal compensation circuit” is to be made up of all the relevant elements set forth in claim 1 and claim 5, or whether the elements listed in claim 5 are to replace the structures previously set forth in the base claim.¹ Claim 5 thus does not reasonably apprise those of skill in the art of its scope.

In the case that claim 5 may be interpreted as “wherein the signal compensation circuit further comprises” -- that is, further limits claim 1 by the recitation of additional

¹ If claim 5 were to be interpreted as replacing the elements previously set forth in the base claim, then claim 5 would fail to pass muster under 35 U.S.C. § 112, fourth paragraph. By removing elements from claim 1, claim 5 would not contain all the limitations of claim 1.

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elements making up the signal compensation circuit -- then the disclosure fails to support claim 5 as required by 35 U.S.C. § 112, first paragraph.

To comply with the written description requirement of 35 U.S.C. § 112, first paragraph, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the "written description" inquiry, whatever is now claimed. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991).

Claim 1 reads on the instant Figure 11 embodiment (described at pages 7 and 8 of the specification) which uses a "digital processor." Claim 5 lists elements found in the Figure 2 embodiment (described at pages 5 through 7 of the specification). However, there is no description of an embodiment which combines the elements from the separate embodiments. For example, there is no described embodiment which uses "an A/D converter for digitizing the (R,G,B) signals" (Claim 1) and, additionally, another "A/D...converter for digitizing the image signal according to a reference voltage" (Claim 5).

For the reasons above, we reject claim 5 under 35 U.S.C. § 112, second paragraph, or, in the alternative, under 35 U.S.C. § 112, first paragraph.

CONCLUSION

The rejections of claims 1-5 and 8-12 under 35 U.S.C. § 103 are reversed.

Claim 5 is newly rejected by us under 35 U.S.C. § 112, second paragraph, or, in the alternative, under 35 U.S.C. § 112, first paragraph.

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claim:

(1) Submit an appropriate amendment of the claim so rejected or a showing of facts relating to the claim so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner

. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

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No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a).

REVERSED -- 37 CFR § 1.196(b)

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Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
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HOWARD B. BLANKENSHIP)	
Administrative Patent Judge)	

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