

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HONGLI YANG, XINPING HE, and
QINGWEI SHAN

Appeal No. 2005-0116
Application No. 10/109,390

ON BRIEF

Before KRASS, DIXON, and MACDONALD, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-10, which are all of the claims pending in this application.

We REVERSE.

Appellants' invention relates to a method and apparatus for KTC noise canceling in a linear CMOS image sensor. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A method of reading out a pixel signal from a pixel comprising:
capturing a first black reference signal from said pixel prior to said pixel starting an integration period;
after completion of said integration period, capturing a pixel signal;
capturing a second black reference signal following completion of said integration period; and
outputting said first black reference signal, said second black reference signal, and said pixel signal and using both said first black reference signal and said second black reference signal to modify said pixel signal.

The prior art of record relied upon by the examiner in rejecting the appealed claims is as follows:

Fossum et al. (Fossum)	5,471,515	Nov. 28, 1995
Merrill et al. (Merrill)	5,962,844	Oct. 05, 1999 (filed Sep. 03, 1997)
Booth, Jr.	6,078,037	Jun. 20, 2000 (filed Apr. 16, 1998)
Dhuse et al. (Dhuse)	6,133,862	Oct. 17, 2000 (filed Jul. 31, 1998)
Gowda et al. (Gowda)	6,344,877	Feb. 05, 2002 (filed Jun. 12, 1997)

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Claims 1-2 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Fossum. Claim 3 stands rejected under 35 U.S.C. § 103 as being unpatentable over Fossum in view of Merrill. Claims 4 and 5 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fossum in view of Gowda. Claims 6-9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Dhuse in view of Booth, Jr. Claim 10 stands rejected under 35 U.S.C. § 103 as being unpatentable over Dhuse in view of Booth and Merrill.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the examiner's answer (mailed Apr. 21, 2004) for the examiner's reasoning in support of the rejections, and to appellants' brief (filed Jan. 14, 2004) for appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by appellants and the examiner. As a consequence of our review, we make the determinations which follow.

35 U.S.C. § 102

Initially we note that anticipation by a prior art reference does not require either the inventive concept of the claimed subject matter or the recognition of inherent properties that may be possessed by the prior art reference. **See Verdegaal Bros. Inc. v. Union Oil Co.**, 814 F.2d 628, 633, 2 USPQ2d 1051, 1054 (Fed. Cir.), **cert. denied**,

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484 U.S. 827 (1987). A prior art reference anticipates the subject matter of a claim when the reference discloses every feature of the claimed invention, either explicitly or inherently (**see Hazani v. Int'l Trade Comm'n**, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed. Cir. 1997) and **RCA Corp. v. Applied Digital Data Systems, Inc.**, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984)); however, the law of anticipation does not require that the reference teach what the appellants are claiming, but only that the claims on appeal "read on" something disclosed in the reference (**see Kalman v. Kimberly-Clark Corp.**, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), **cert. denied**, 465 U.S. 1026 (1984)). Further, as pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." **In re Hiniker Co.**, 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Therefore, we look to the limitations set forth in independent claim 1. Claim 1 sets forth

outputting said first black reference signal, said second black reference signal, and said pixel signal and using both said first black reference signal and said second black reference signal to modify said pixel signal.

Therefore, Fossum must teach the use of both a first and second black reference signal.

The examiner maintains that Fossum teaches "a second black reference signal (fixed pattern noise) following the completion of said integration period (see Col. 5, lines 20-23)." (Answer at page 3.) Appellants argue that the measuring of this difference in threshold voltages between output transistors is not the same as the claimed "capturing a second black reference signal following completion of said integration period" and

subsequent use thereof to modify the pixel signal. (Brief at page 5.) We agree with appellants that Fossum does not teach capturing a second black reference signal from the pixel and use thereof with a first black reference signal to modify the captured pixel signal.

The examiner maintains that the language of independent claim 1 does not explicitly state that the second black reference signal is captured from the pixel and so the examiner affirms his position that measuring the difference in threshold voltages in Fossum anticipates the second black reference signal as defined in the limitations of independent claim 1. (Answer at page 8.) We disagree with the examiner's position, and find that the language of independent claim 1 requires the "capturing" of all three signals. Therefore, the signals should be acquired in a similar manner and from the "pixel" as explicitly recited with respect to the first black reference signal and the pixel signal.

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Therefore, we do not find the examiner's interpretation of the claim language to be reasonable, and we find that the examiner has not shown that Fossum teaches all of the claimed limitations, and we cannot sustain the rejection of independent claim 1 and dependent claim 2.

35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. **See In re Rijckaert**, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A *prima facie* case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. **See In re Lintner**, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. **See In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight

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reconstruction of the invention from the prior art. The examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See **In re Warner**, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), **cert. denied**, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. **See, e.g., Grain Processing Corp. v. American Maize-Prods. Co.**, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

When determining obviousness, "the [E]xaminer can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in art would lead that individual to combine the relevant teachings of the references.'" **In re Lee**, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), citing **In re Fritch**, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" **In re Dembiczak**, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). "Mere denials and conclusory statements, however, are not sufficient to

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establish a genuine issue of material fact." **Dembiczak**, 175 F.3d at 999, 50 USPQ2d at 1617, citing **McElmurry v. Arkansas Power & Light Co.**, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

The examiner relies upon the teachings of Merrill to teach the additional limitation in claim 3 with respect to the use of a buffer at the output of the circuit. The examiner relies upon the teachings of Gowda to teach the additional limitation in claims 4 and 5 with respect to the use of the second reference signal a subsequent first reference signal. Appellants do not contest the teachings of Merrill or Gowda, but maintain that they do not remedy the deficiencies in Fossum as noted above. We agree with appellants and find that the examiner has not established a *prima facie* case of obviousness of the claimed invention.

With respect to independent claim 6, the examiner relies upon the teachings of Dhuse in combination with Booth, Jr. as evidence of obviousness of the detailed limitations of independent claim 6. From our review of the teachings of Dhuse, we agree with appellants' (Brief at pages 6-7) that Dhuse is deficient with respect to the second black reference signal branch and that the teachings of Booth, Jr. do not fairly suggest the use of separate and distinct branch circuits for the same pixel and use thereof for black reference signals to modify the pixel signal. Therefore, we find that the examiner has not established a *prima facie* case of obviousness of the invention as recited in

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independent claim 6 and dependent claims 7-9. Nor do we find that the teachings of Merrill remedy the noted deficiencies of the above combination. Therefore, we cannot sustain the rejection of claims 6-10.

CONCLUSION

To summarize, the decision of the examiner to reject claims 3-10 under 35 U.S.C. § 103 is reversed, and the decision of the examiner to reject claims 1 and 2 under 35 U.S.C. § 102 is reversed

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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ALLEN R. MACDONALD)	
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