

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(2) is not binding precedent of the Board.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. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ALAN N. COOPER

Appeal No. 1997-2585
Application 07/930,880

ON BRIEF

Before HAIRSTON, FLEMING and HECKER, **Administrative Patent Judges**.

FLEMING, **Administrative Patent Judge**.

DECISION ON APPEAL

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This is a decision on appeal from the rejection of claims 1 through 10 and 12 through 20. Claim 11 has been canceled.

Appellant's invention relates to video displays for motor vehicles using a single silicon detector which can detect different wavelengths corresponding to the visible colored light and short wavelength infrared radiation. More specifically, Appellant on pages 10 and 11 of the specification and Figs. 4a, 4b, and 5 shows a series of columns of filters over a single silicon detector to distinguish between red, blue, green, and infrared wavelengths. Electrical signals corresponding to each detected wavelength or color are processed through matrix 56 and encoder 58. The final image is black and white based on the infrared signal enhanced with the colored information for objects such as tail lights and stop lights obtained from the visible colored light signals.

Representative independent claim 1 is reproduced as follows:

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1. A video system which provides an operator of a vehicle with an enhanced visual display of selected portions of the vehicle's surrounding environment comprising:

an illuminator to project short wavelength infrared energy;

a single silicon detector for both short wavelength infrared and visible colored light electromagnetic radiation to generate both short wavelength infrared signals and visible colored light signals;

a signal processing circuit to produce electrical signals corresponding to the detected electromagnetic radiation and based on said short wavelength infrared signals and said visible colored light signals;

the signal processing circuit converting the electrical signals corresponding to the detected short wavelength infrared radiation into a visual display for the vehicle operator; and

the signal processing circuit enhancing the visual display of the infrared signal with selected portions of the colored light signal.

The Examiner relies on the following references:

Harada et al. (Harada)	4,651,001	Mar. 17, 1987
Lillquist et al. (Lillquist)	4,679,068	July 7, 1987 ¹

¹ The Examiner's final rejection was incorrectly based on the U.S. Patent No. 4,751,571 to Lillquist issued June 14, 1988 and was corrected in the supplemental examiner's answer mailed August 19, 1996 by introducing new grounds of rejection based on the U.S. Patent No. 4,679,068 to Lillquist et al..

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After careful review of the evidence before us, we do not agree with the Examiner that claims 1 through 10, and 12 through 20 are properly rejected under 35 U.S.C. § 103. Accordingly, we reverse.

The Examiner has failed to set forth a **prima facie** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found

in the prior art, or by implications contained in such teachings or suggestions. **In re Sernaker**, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." **Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.**, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), **cert. denied**, 519 U.S. 822 (1996) **citing W.L. Gore & Assoc., Inc. v. Garlock, Inc.**, 721 F.2d

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1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), **cert. denied**,
469 U.S. 851 (1984).

Turning to the rejection of claims 1, 2, 10, 15, 16,
and 20 under 35 U.S.C. § 103, Appellant on page 5 of the
appeal brief argues that contrary to the claimed single
silicon detector for both infrared and visible color light,
Burley's night vision system has an infrared imager separate
from a visible light color TV camera. Appellant on page 2 of
the supplemental reply brief adds that the output signal from
the single silicon detector of Lillquist corresponding to the
visible light radiation is black and white.

In response to Appellant's arguments, the Examiner
on page 7 of the second supplemental answer points out that

Lillquist is relied upon to show a single silicon detector
responsive to both visible colored light and infrared
radiation while Burley teaches the use of such combined sensor
in a vehicle. The Examiner on page 10 of the second
supplemental answer adds that visible light is colored and

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therefore, the recited limitation of "visible colored light" is the same as the visible light radiation of Lillquist.

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). Claims will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not to be read into the claims. *In re Etter*, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir.), **cert. denied**, 474 U.S. 828 (1985).

We note that Appellant's claim 1 recites

a single silicon detector for both short wavelength infrared and visible colored light electromagnetic radiation to generate both short wavelength infrared signals and visible colored light signals (emphasis added).

We find that Appellant's claim 1 includes a single silicon detector for both short wavelength infrared and visible colored light. Additionally, Appellant specifically recites a

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detector that generates visible colored light signals which clearly differ from black and white signals with various shades of gray representing different colors. Prior to the amendment of October 28, 1996, independent claim 1 did not preclude a single silicon detector to generate visible black and white signals. However, claim 1 as amended, which is now before us, does clearly limit the output from the detector to visible colored light signals. This is further supported by Appellant's disclosure on page 10 of the specification and Figs. 4a and 5 which show that electrical signals corresponding to infrared, blue, green, and red wavelengths are generated by detector 34 and sent to matrix 56. Thus, Appellant's claim 1 requires a single silicon detector to generate electrical signals corresponding to both infrared and visible colored light radiation.

We are not inclined to dispense with proof by evidence when the proposition at issue is not supported by a teaching in a prior art reference or shown to be common knowledge of unquestionable demonstration. Our reviewing court requires this evidence in order to establish a *prima*

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facie case. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984); *In re Knapp-Monarch Co.*, 296 F.2d 230, 232, 132 USPQ 6, 8

(CCPA 1961); *In re Cofer*, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966). Furthermore, our reviewing court states in *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788, the following:

The Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1 . . . (1966), focused on the procedural and evidentiary processes in reaching a conclusion under section 103. As adapted to *ex parte* procedure, *Graham* is interpreted as continuing to place the "burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103" [*citing In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)].

After a review of the teachings in Lillquist, we fail to find a single silicon detector with output signals corresponding to both short wavelength and visible colored light radiation as recited in Appellant's claim 1. We disagree with the Examiner that Appellant's claimed limitation of "visible colored light" lacks patentable weight and clearly

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reads on Lillquist's visible light radiation. Lillquist in col. 3, lines 27 through 39, and Fig. 1 teaches that a single silicon detector 12 detects infrared and visible colored light but generates black and white electrical signals corresponding to the visible light. Therefore, the limitation of "to generate . . . visible colored light signals," as recited in Appellant's

claim 1, is absent in Lillquist's detector which generates black and white signals corresponding to the visible light. We note that the other independent claims 10 and 15 similarly recite a single silicon detector for producing electrical signals corresponding to both infrared and colored light. Accordingly, we reverse the rejection of claims 1 through 10 and 12 through 20 under 35 U.S.C. § 103 over Lillquist and Burley.

In view of the foregoing, the decision of the Examiner rejecting claims 1 through 10, and 12 through 20 under 35 U.S.C. § 103 is reversed.

REVERSED

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	KENNETH W. HAIRSTON)	
	Administrative Patent Judge)	
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PATENT)	
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