

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(2) is not binding precedent of the Board.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. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SATOSHI ARAKAWA

Appeal No. 96-1446
Application 08/103,174¹

ON BRIEF

Before THOMAS, BARRETT, and TORCZON, Administrative Patent
Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed August 6, 1993.
According to appellant, the application is a continuation of
Application 07/564,515, filed August 9, 1990.

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Appellant appeals to the Board from the examiner's final rejection of claims 2 to 5 and 8 to 12, which constitute all the claims remaining in the application.

Representative claim 5 is reproduced below:

5. A flat type display apparatus comprising;
a substrate;

an active display device, on said substrate, having a plurality of picture elements arranged in a two dimensional matrix form, wherein each of the plurality of picture elements of said active display device emits a back light having a light intensity;

a transmission type passive display device, superposed on said active display device, having a plurality of picture elements arranged in a two dimensional matrix form, wherein each of the plurality of picture elements of said transmission type passive display device having a light transmittance; and

a control circuit for independently controlling the light transmitting of each of the picture elements of said transmission type passive display device so as to cause each of the picture elements to assume one of a plurality of gradation levels and the light intensity of each of the picture elements of said active display device so as to take on one of a plurality of intensities.

The following references are relied on by the examiner:

Bly	4,170,771	Oct. 9, 1979
Yoshimura	4,574,315	Mar. 4,
1986		
Shiraishi et al. (Shiraishi)	5,144,292	Sep. 1,
1992		

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(filed July 17, 1986)

Claims 2 to 5 and 8 to 12 stand rejected under 35 U.S.C.

§ 103. As evidence of obviousness, the examiner relies upon Bly in view of Yoshimura, further in view of Shiraishi.

Rather than repeat the positions of the appellant and the examiner, reference is made to the briefs and the answers for the respective details thereof.

OPINION

For the reasons expressed by the examiner in the Answer, and for the additional reasons presented here, we will sustain the prior art rejection of all claims on appeal under 35 U.S.C. § 103. To round-out the examiner's detailed analysis of the claimed invention and appellant's arguments, as well as the teachings and suggestions of the references relied upon, we add the following.

To the extent appellant argues that the purposes of the references relied upon by the examiner are different from the appellant's disclosed purpose, this is not pertinent to the issue and is essentially irrelevant if the prior art teachings

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would have led the artisan to construct an arrangement having the claimed structural features. In re Heck, 699 F.2d 1331, 216 USPQ 1038 (Fed. Cir. 1983) and In re Kronig, 539 F.2d 1300, 190 USPQ 425 (CCPA 1976). The law of obviousness does not require that references be combined for reasons contemplated by an inventor, but only looks to whether the motivation or suggestion to combine references is provided by prior art taken as a whole. In re Beattie, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992). In an obviousness determination, the prior art need not suggest solving the same problem set forth by appellant. In re Dillion, 919 F.2d 688, 692-93, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (in banc) (overruling in part In re Wright, 848 F.3d 1216, 1220, 6 USPQ2d 1959, 1962 (Fed. Cir. 1988)), cert. denied, 500 U.S. 904 (1991).

The top of page 5 of the Brief indicates that appellant regards Bly's teachings and showings that an active display device A and a passive display device P are independently controlled in synchronism with each other in such a manner as to display images defined by picture elements. Independent

claim 5 requires that the picture elements be arranged in a two dimensional matrix form. In the paragraph at the top of column 2 of Bly, lines 6-12, various types of display approaches are generally taught including scan modes permitting "pixel-at-a-time" scanning modes. The showing of the M matrix from the perspective of the viewer's eye at 62 in Figure 1 would have clearly indicated to the artisan a two dimensional matrix form was the resulting image presented to the user 62. Additionally, with respect to the discussion of Figure 2, the language at column 2, lines 51 through 55 indicate to the artisan and the reader that a video type scan was attempted to be duplicated in the circuit arrangement of Figure 2. This in addition to the other teachings and showings in Bly clearly would have suggested to the artisan a video-type scan or a raster scanned picture element based approach was obvious to the artisan. In any event, the evidence provided by the examiner in the form of Yoshimura's teachings and the noted portions relied upon by the examiner clearly would have indicated to the artisan that a few years later in the art as compared with Bly, Yoshimura indicates

that matrix displays existed such that they included a plurality of picture elements or pixels. The column 1, lines 11 through 16 reference relied upon by the examiner in Yoshimura indicates that LCD as well as EL-type displays, the two utilized by appellant, both existed in a matrix form of picture elements. Yoshimura's Figure 3 shows a two dimensional array of picture elements otherwise indicated as display elements in his other figures.

Clearly, from an artisan's perspective then, the collective teachings of Bly and Yoshimura would have indicated to the artisan that it was known in the art to arrange such display types as LCD and EL having two dimensional forms of picture elements. Furthermore, the selective controllability of both Bly and Yoshimura would have also indicated to the artisan that each of the picture elements would have been desirably controllable.

Thus, appellant's reliance upon column 1, lines 25 to 35 of Bly to indicate that Bly teaches away from a two dimensional array picture element is initially misplaced in our view. We do not regard such teaching as a true teaching

away as Bly's general disclosure merely relates to one dimensional array displays being placed in an orthogonal relationship. Bly does not expressly state that a two dimensional matrix of picture elements should not be used according to his teachings. In the same manner disclosed and broadly claimed, Bly clearly shows an active matrix in the form of an EL display providing back lighting to a passive-type LCD display P in Figure 1 for the viewer 62 to see. Shiraishi confirms this overall basic structural arrangement. We do not agree that Bly may be fairly said to teach away. The examiner has properly weighed the teaching value of Yoshimura in context anyway. Moreover, Shiraishi's two dimensional EL-LCD sandwiched display further confirms this assessment. See at least Figure 3.

At the top of page 6 of appellant's Brief it stated that Shiraishi merely discloses the conventional practice of providing a single backlighting element for a passive display. This statement confirms what the art relied on generally shows, that it was known in the art to provide backlighting for a

passive display. We have just indicated our view, in contradistinction to appellant's assertion at the bottom of page 6 of the Brief that Bly does not teach the use of an active element as a backlight for a passive display, that it does in fact show this in Figure 1 anyway. In any event, the collective teachings of the three references relied upon by the examiner would have clearly indicated the obviousness of extending the backlighting teachings of Bly and Shiraishi to the two dimensional matrix orientations taught by Yoshimura such as to be able to individually control each of the individual pixel elements in such a two dimensional array.

Dependent claim 8 recites that the active display device is controlled in such a manner as to improve luminance resolution of the entire apparatus. This is generally what the teachings and showings in Shiraishi indicate since it is the backlighting active display element in the form of an electroluminescent backlighting array which is separately controlled according to the lamp off, the lamp dim, the lamp standard, the lamp bright codes from the latch 20 through the decoder 21 and the E-L panel voltage generating circuit 23 in

Figure 4 of Shiraishi in accordance with the flow chart of Figure 5. Increasing the luminosity levels in a such a manner clearly would have increased luminance resolution to the extent broadly set forth in claim 8 on appeal. Furthermore, column 4, lines 10 through 13 of Shiraishi indicate that the luminosity levels are user adjustable based upon the lighting environment in which the data processing device of this reference is used.

As to the features of dependent claim 10, it appears that the showings and discussion in Bly generally would have indicated to the artisan a one-to-one correspondence of the number of picture elements in the active and passive displays of this reference. In conjunction with the related features received in dependent claim 2 which recite that the passive display element has a finer resolution of its picture elements than the active display picture elements, we agree with the examiner's basic position that such was a proper design choice or trade-off for the artisan to have made based upon the environment of use of the overall display device.

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In view of the foregoing, since claims 5, 2, 8 and 10 are the only claims argued by appellant in the brief according to the claim grouping at page 4, the decision of the examiner rejecting claims 2 to 5 and 8 to 12 under 35 U.S.C. § 103 is affirmed.

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

AFFIRMED

	JAMES D. THOMAS)	
	Administrative Patent Judge)	
)	
)	
)	BOARD OF
PATENT)	
	LEE E. BARRETT)	APPEALS
AND)	
	Administrative Patent Judge)	
INTERFERENCES)	
)	
)	
	RICHARD TORCZON)	
	Administrative Patent Judge)	

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