

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JAMES H. ATHERTON

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Appeal No. 97-2860  
Application 08/472,836<sup>1</sup>

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ON BRIEF

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Before JERRY SMITH, BARRETT and LEE, Administrative Patent Judges.

LEE, 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, 2, 4-7, 13, 14 and 16-19. Claims 3, 8-12, 15, and 20-24 have been cancelled. No claim has been allowed.

**References relied on by the Examiner**

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<sup>1</sup> Application filed June 7, 1995. According to appellant, it is a divisional application of application 08/277,824, filed July 20, 1994, now Patent No. 5,483,366, issued January 9, 1996.

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Shimada et al. (Shimada) Oct. 27, 1992	5,159,477	
Kim et al. (Kim) 16, 1994	5,339,181	Aug.
Miyata et al. (Miyata) 27, 1994	5,351,145	Sep.

### **The rejections on appeal**

Claims 1, 2, 4, 5, 13, 14, 16 and 17 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Miyata and Kim.

Claims 6, 7, 18 and 19 stand finally rejected under 35 U.S.C. § 103 as being unpatentable over Miyata, Kim, and Shimada.

The appellant has stated that all of the claims on appeal stand or fall together. (Br. at 5).

### **The Invention**

The invention is directed to a liquid crystal display wherein a select line and at least one extension from the select line forms a capacitor with an overlapped portion of a region of conductive material in a pixel. Claims 1 and 13 are the only independent claims. Representative claim 1 is reproduced below:

1. A liquid crystal display comprising:

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a base plate having a surface;

at least one pixel on said surface of the base plate,  
said pixel including a region of a conductive material having  
a plurality of sides;

a conductive select line of substantially uniform width  
extending over and across said region adjacent one side  
thereof so as to overlap said region;

at least one conductive extension from the select line  
over and across another side of the region;

a layer of a dielectric material between the region and  
the select line and its extension;

said select line and extensions forming with the region a  
capacitor which is electrically connected to said region; and

a data line of a conductive material extending along a  
side of the region and electrically connected to the region.

### Opinion

We affirm.

Our opinion is based solely on the arguments made by the  
appellant in the appeal and reply briefs. Arguments which  
could have been raised but which were not are not before us,  
are not at issue, and are considered waived.

The appellant correctly points out (Br. at 6) that each  
of claims 1 and 13 recite that the select line is of  
substantially uniform width and extends over and across the  
pixel region of conductive material adjacent one side thereof

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so as to overlap the region. According to the examiner, this feature is disclosed by Miyata simply because the select line 7 extends over the top of each pixel area 17 (see Miyata's Figure 2). We disagree. The broadest reasonable interpretation of the claim language in light of the specification does not permit reading the claimed overlap between the select line and the conductive material of the pixel region to form a capacitor therewith as being satisfied by the select line's being "above" a side of the pixel area. In our view, and consistent with the specification, the overlap is in the plane of the surface of the pixel area. For making the overlap, the claims also require a crossing over of the pixel region by the select line, which is not met simply by a select line which runs outside the perimeter of the pixel region as is shown in Figure 2 of Miyata.

Nevertheless, Kim makes up for the deficiency of Miyata. It cannot be reasonably disputed that in Kim the select line extends over and across the surface area of the pixel region to form an overlap therewith. What the appellant argues, instead, is that the select line which crosses over the top of Kim's pixels is not of substantially uniform width as is

required by the claims. But the argument is misplaced. The appellant evidently looks merely at Figure 1A of Kim which illustrates the prior art, and not at Figure 2A of Kim which illustrates an improvement over the structure of Figure 1A. In Figure 2A of Kim, the select line above the extensions therefrom does indeed overlap the top border of the pixels and does have a substantially uniform width. The extensions begin from that part of the select line which is already below the top border of the pixels. The appellant cannot look only at portions of Kim's disclosure to the exclusion of other embodiments which meet the feature at issue.

As for the extensions which run down another side of the pixel area, Kim discloses that as well. See Kim's Figure 2A. In that regard, the appellant makes no contrary assertion. What the appellant does argue, however, is that the teachings of Kim are not combinable with the disclosure of Miyata. The appellant correctly points out that Kim's invention sought to reduce the size of the extensions covering the pixel's active area without diminishing the capacitance (Br. at 8). According to the appellant, because Miyata's select line does not even overlap any portion of the pixel, there is no

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occasion for application of Kim's invention. In other words, the argument is that because Miyata does not suffer the same problem as the prior art addressed by Kim, Kim's invention has no application in Miyata. For several reasons, the appellant's argument is misplaced.

It is not entirely accurate to state that Miyata does not have the same problem of pixel areas being taken up by capacitor structures. If one with ordinary skill in the art wanted to increase the capacitance afforded in Miyata, he or she would likely confront the same problem, i.e., at some point an expansion of the width of the select line would take up additional active pixel area. More importantly, a reference must be considered for everything it teaches by way of technology and is not limited to the particular invention it is describing and attempting to protect. EWP Corp. v. Reliance Universal Inc., 755 F.2d 898, 907, 225 USPQ 20, 25 (Fed. Cir.), cert. denied, 474 U.S. 843 (1985). Kim's disclosure teaches two additional advantages which do not focus on yielding more capacitance with less active pixel area overlap.

In Kim's column 5, lines 40-47, it is stated:

Thus, the present invention reduces the amount of Leak Light emitted through the Aperture Area of the front glass substrate 101 by an amount which is proportional to the difference ( $2_2-2_1$ ), relative to the aforesaid prior art active matrix LCD, thereby significantly increasing the contrast ratio thereof, vis-a-vis that of said prior art active matrix LCD.

In Kim's column 5, lines 48-64, it is stated:

Yet further, as can be most clearly seen in FIG. 2C, in the present invention, an edge portion of each pixel electrode 4 preferably overlaps the first electrode 10 of its associated storage capacitor C by a predetermined width sufficient to ensure that the peripheral boundary of each pixel electrode 4 is formed on the same plane as the first electrode 10 of its associated storage capacitor C, without having to traverse an abrupt step. By contrast, with the prior art active matrix LCD, an abrupt step is necessarily formed at the boundary between each pixel electrode 4 and the distal edge of the first electrode 10 of its associated storage capacitor C. As such, problems such as attenuation or cracking of the pixel electrode pattern due to inadequate step coverage are inevitable, thereby resulting in decreased yield and increased manufacturing difficulties and costs. The present invention eliminates these problems.

For both of the above-quoted disclosed advantages, one with ordinary skill in the art would have known to implement Kim's select line pattern in the crystal display of Miyata.

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For all of the foregoing reasons, we agree with the examiner that the inventions of claims 1 and 13 are unpatentable over Miyata and Kim. Because the appellant has stated that all claims on appeal stand or fall together (Br. at 5), we sustain the rejection of claims 1, 2, 4, 5, 13, 14, 16 and 17 as being unpatentable over Miyata and Kim. With regard to the rejection of claims 6, 7, 18 and 19 over Miyata, Kim, and Shimada, the appellant does not make any argument in addition to those made in connection with the rejection of claims 1, 2, 4, 5, 13, 14, 16 and 17 over Miyata and Kim. Accordingly, we also sustain the rejection of claims 6, 7, 18 and 19 as being unpatentable over Miyata, Kim, and Shimada.

#### Conclusion

The rejection of claims 1, 2, 4, 5, 13, 14, 16 and 17 under 35 U.S.C. § 103 as being unpatentable over Miyata and Kim is affirmed.

The rejection of claims 6, 7, 18 and 19 under 35 U.S.C. § 103 as being unpatentable over Miyata, Kim, and Shimada is affirmed.

Because our discussion of the references shifted somewhat from the examiner's rationale, we denominate the affirmance as

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a new ground of rejection to permit the appellant an opportunity to address any new point raised in our reading of the prior art.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

(b) Appellant may file a single request for rehearing within two months from the date of the original decision . . . .

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 (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to

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the claims 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. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

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

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**AFFIRMED-196(b)**

JERRY SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
LEE E. BARRETT	)	)
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
JAMESON LEE	)	)
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