

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BOB LEE MACKEY

Appeal 2007-1430
Application 10/407,696
Technology Center 2600

Decided: July 26, 2007

Before ANITA PELLMAN GROSS, ROBERT E. NAPPI, and JAY P. LUCAS, *Administrative Patent Judges*.

GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

MacKey (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1 through 52, which are all of the claims pending in this application.

Appellant's invention relates to a capacitive sensing device. Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A capacitive sensing device comprising:
 - a substantially transparent substrate; and
 - a first set of patterned conductive traces formed above said substantially transparent substrate, each of said first set of patterned conductive traces having a width such that said capacitive sensing device does not have to be arranged with respect to an underlying image in order to avoid deleterious obstruction of said underlying image by said first set of patterned conductive traces, said underlying image is separate from said capacitive sensing device, wherein said capacitive sensing device is separate from active components used to comprise an information display device.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Binstead	US 5,844,506	Dec. 01, 1998
Clancy	US 5,952,998	Sep. 14, 1999

Claims 1 through 5, 7 through 13, 15 through 24, 26 through 28, 31 through 46, and 50 through 52 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Clancy.

Claims 6, 30, and 49 stand rejected under 35 U.S.C. § 103 as being unpatentable over Clancy.

Claims 14, 25, 29, 47, and 48 stand rejected under 35 U.S.C. § 103 as being unpatentable over Clancy in view of Binstead.

We refer to the Examiner's Answer (mailed December 20, 2006) and to Appellant's Brief (filed October 23, 2006) and Reply Brief (filed February 1, 2007) for the respective arguments.

SUMMARY OF DECISION

As a consequence of our review, we will affirm the anticipation rejection of claims 1 through 5, 7, 9 through 13, 15 through 24, 26 through 28, 31, 33 through 46, 50, and 52, reverse the anticipation of claims 8, 32, and 51, affirm the obviousness rejection of claims 14, 25, 29, 47, and 48, and reverse the obviousness rejection of claims 6, 30, and 49. We also will enter a new ground of rejection of claims 6, 8, 30, 32, 49, and 51 under 35 U.S.C. § 103 over Clancy in view of Binstead.

OPINION

Independent claim 1 recites, in pertinent part, that the patterned conductive traces "hav[e] a width such that said capacitive sensing device does not have to be arranged with respect to an underlying image in order to avoid deleterious obstruction of said underlying image." Independent claims 15 and 34 recite similar limitations.

The Examiner (Answer 3) rejects claims 1 through 5, 7 through 13, 15 through 24, 26 through 28, 31 through 46, and 50 through 52 as being anticipated by Clancy. The Examiner asserts (Answer 3) that the widths of the Clancy's conductive traces are formed such that the conductive traces do not have to be arranged with respect to the underlying image to avoid obstruction of the image by the traces, as required by the independent claims. Appellant contends (Br. 8-9 and Reply Br. 2-3) that Clancy specifies "through appropriate arrangement of the traces ... images may be projected by the LCD display 20 ... for viewing by the user." Thus, Appellant contends (Br. 8) that Clancy requires a particular arrangement of the traces with respect to the underlying image to prevent obstruction of the image.

The issue, therefore, is whether the width of the traces or the arrangement of the traces with respect to the underlying image avoids obstruction of the image.

Clancy states (col. 5, ll. 26-29) that when the traces are not transparent, the traces may interfere with the image. Clancy (col. 5, ll. 29-32) solves the problem of interference to improve visualization of the image not only by positioning the image appropriately and making it sufficiently bold but also by sizing the array of traces. Clancy states (col. 5, ll. 33-37) that images 27 and 28 are "sized sufficiently large to be viewed even if they are partially obscured by capacitive elements **74** or traces **72** or **76**." Furthermore, Clancy discloses (col. 4, lines 56-60) that the capacitive elements along the traces should be substantially longer than they are wide to lessen interference with light passing through the touchscreen. Thus, Clancy teaches that making the capacitive elements and traces fairly narrow relative to the size of the image prevents deleterious obstruction of the image. Accordingly, we will sustain the anticipation rejection of claims 1 through 5, 7, 9 through 11, 13, 15 through 20, 22 through 24, 26 through 28, 31, 33 through 39, 41 through 46, 50, and 52.

Regarding claims 12, 21, and 40, Appellant additionally contends (Br. 10-11) that Clancy's traces are not substantially opaque, as required by the claims. Thus, the second issue is whether Clancy teaches substantially opaque traces. Clancy discloses (col. 4, ll. 30-34) that the traces may be formed by silkscreening or printing conductive ink on the transparent membrane. Clancy continues in the subsequent paragraph (col. 4, ll. 35-41) that the traces may instead be formed of a transparent conductive material such as indium tin oxide. From the juxtaposition of the conductive ink and

the transparent material, we can infer that the conductive ink is opaque rather than transparent, particularly in light of column 5, lines 26-29, wherein Clancy refers to situations where the traces are not transparent. Therefore, we will sustain the anticipation rejection of claims 12, 21, and 40.

For claims 8, 32, and 51, Appellant further contends (Br. 12) that Clancy fails to disclose the claim limitation of the conductive trace width being less than a pixel width. The issue is thus whether Clancy teaches a width of the traces being less than the width of a pixel. Although Clancy does teach that the width of the traces should be small relative to the image, Clancy does not relate the width to the width of a pixel. Clancy fails to even mention pixels. Consequently, we cannot sustain the anticipation rejection of claims 8, 32, and 51. However, see the new ground of rejection, *infra*.

The Examiner (Answer 5) rejects claims 6, 30, and 49 under 35 U.S.C. § 103 over Clancy. The Examiner (Answer 5) asserts that Clancy's teaching to size the array of traces leaving substantial room for light to project through the array for adequate visualization suggests the claimed trace width of less than 12 micrometers. Appellant contends (Br. 13) that Clancy fails to define "adequate visualization" and, therefore, fails to suggest the claimed trace width. Hence, the issue is whether the claimed range for the trace width would have been obvious from the teachings of Clancy.

We find no teaching or suggestion in Clancy of any particular width for the traces, just that the width should be sufficiently thin to allow the underlying image to be seen. Without some guidance as to a specific width, Clancy fails to render obvious the claimed width. Consequently, we cannot

sustain the obviousness rejection of claims 6, 30, and 49. However, see the new ground of rejection, *infra*.

To reject claims 14, 25, 29, 47, and 48, the Examiner (Answer 6) combines Binstead with Clancy, relying upon Binstead for the claimed landing pad regions. Appellant contends (Br. 14) that Binstead uses transparent conductor elements to prevent the conductor elements from being seen, and, thus, fails to teach the claimed width recited in each of the independent claims. Appellant does not argue the combination of Binstead with Clancy nor the claim limitation of landing pad regions. Since we determined *supra* that Clancy teaches the claimed trace width, we will sustain the obviousness rejection of claims 14, 25, 29, 47, and 48 over Clancy in view of Binstead.

Under the provisions of 37 C.F.R. § 41.50(b), we enter the following new ground of rejection against Appellant's claims 6, 8, 30, 32, 49, and 51. Claims 6, 8, 30, 32, 49, and 51 are rejected under 35 U.S.C. § 103 as obvious over Clancy in view of Binstead.

Regarding claims 8, 32, and 51, we found *supra* that Clancy failed to disclose that the conductive trace width is less than the width of a pixel. Similarly, for claims 6, 30, and 49, we found *supra* that Clancy failed to teach or suggest that the width of the traces is less than 12 micrometers. However, Binstead teaches (col. 7, ll. 47-50) that wires with a diameter between 10 and 25 micrometers are invisible to the naked eye when used in a touchscreen. Since Clancy teaches (col. 5, ll. 26-32) that the trace size should be selected so as not to interfere with the underlying image, and Binstead teaches that a diameter of 10 to 25 micrometers is invisible to the naked eye, it would have been obvious to use a trace width between 10 and

25 micrometers (which overlaps the claimed range of less than 12 micrometers). Furthermore, since the Clancy teaches that the traces are opaque and the combined teachings of Clancy and Binstead suggest that the width of the traces should be selected so as not to interfere with the underlying image and so as to be invisible to the naked eye, it would have been obvious to the skilled artisan to make the width of the traces smaller than the width of a pixel. Otherwise, the trace would significantly obstruct the image from the underlying pixel. Accordingly, claims 6, 8, 30, 32, 49, and 51 would have been obvious over Clancy in view of Binstead.

ORDER

The decision of the Examiner rejecting claims 1 through 5, 7 through 13, 15 through 24, 26 through 28, 31 through 46, and 50 through 52 under 35 U.S.C. § 102(b) is reversed as to claims 8, 32, and 51 but affirmed as to the rest. Also, the decision of the Examiner rejecting claims 6, 14, 25, 29, 30, and 47 through 49 under 35 U.S.C. § 103 is reversed as to claims 6, 30, and 49 but affirmed as to claims 14, 25, 29, 47, and 48. In addition, we enter a new ground of rejection of claims 6, 8, 30, 32, 49, and 51 under 35 U.S.C. § 103 over Clancy in view of Binstead.

Regarding the affirmed rejection(s), 37 C.F.R. § 41.52(a)(1) provides "Appellant may file a single request for rehearing within two months from the date of the original decision of the Board."

In addition to affirming the Examiner's rejection(s) of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)).

37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that 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 the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(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 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.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART
37 C.F.R. § 41.50(b)

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