Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MIKIYA KOBAYASHI

Appeal No. 96-3603
Application No. 08/243,839[1]

ON REHEARING

Before THOMAS, JERRY SMITH, and TORCZON, Administrative Patent Judges.

TORCZON, Administrative Patent Judge.

DECISION ON REQUEST FOR REHEARING

Appellant's request on rehearing for withdrawal (Paper No. 19 at 2) of our prior decision on appeal (Paper No. 18) is denied.

BACKGROUND

Appellant discloses a semiconductor device using fuses or diodes to protect the remaining circuitry from electrostatic damage. (Paper No. 1 at 2-3 and 5-6.) In the decision under rehearing, we reversed two rejections based on our finding that a resistor would not meet the claim requirement for an "opening structure". We affirmed, however, the rejection of

[1] Attorney docket no. P94,0978.

all claims under 35 U.S.C. § 103 in view of Appellant's admitted prior art (Figures 5 and 6) and:

Ukai et al. (Ukai) 5,068,748 26 Nov. 1991

Our conclusion of obviousness was based in part on our finding that a diode, such as those taught in Ukai, would meet the claim requirement for an opening structure. According to Appellant,

> The Board then asserted that it would have been obvious to combine the diodes of Ukai with the structure of the admitted prior art in order to result in the claimed invention. The fundamental error in this analysis is that Ukai does not teach or suggest the use of an "opening structure" as claimed because diodes, which are structures that prevent the transmission of electrical current in a single direction, are not suggestive of opening structures that prevent the transmission of electrical current in either direction.

(Paper No. 19 at 1.) Note that Appellant is not contesting the combination but rather the finding that diodes are opening structures and the claim construction that permits that finding.

DISCUSSION

As we noted in our decision (Paper No. 18 at 2), during prosecution a claim must be construed as broadly as is reasonably possible in light of the disclosure and the related prior art. E.g., In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). This practice reflects the broad

latitude applicants have during prosecution to amend their claims to clarify their intent and to avoid prior art. Id.; In re Morris, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997).

The starting point for claim construction is always the language of the claim itself. Comark Comm. Inc. v. Harris Corp., 156 F.3d 1182, 1186, 48 USPQ2d 1001, 1005 (Fed. Cir. 1998); Desper Prods. Inc. v. QSound Labs. Inc., 157 F.3d 1325, 1332, 48 USPQ2d 1088, 1093 (Fed. Cir. 1998). Appellant stated that all of the appealed claims stood or fell together. (Paper No. 11 at 3.) Pursuant to 37 CFR § 1.192(c)(7), we selected claim 4 as representative of the group. (Paper No. 18 at 1-2.) Claim 4 requires "an opening structure in said connection pattern." The claim itself does not define "opening structure" beyond the functional limitation that it open something at sometime and the structural limitation that it be in the connection pattern. Nothing in the language of claim 4 excludes a diode as an opening structure or requires the use of a fuse pattern. Both the specification and the related art support our construction that an opening structure may be a diode.

In the specification, Appellant explains the opening structure as follows:

> The present invention is characterized in that the connection pattern has opening structures for dealing with an external overcurrent provided on both sides of the division lines. Specifically[,] the opening structures are constituted by fuse patterns. Alternatively, the opening structure may be constituted by diodes having a reduced gate width.

(Paper No. 1 at 6, emphasis added; see also Paper No. 1 at 11 (explaining how the diodes open in response to an overcurrent before the transistors of the internal circuit are damaged).) The genus of opening structures is bounded by the fact that each "must have a property such that predetermined conductivity is maintained unless an overcurrent is applied and it opens when such an overcurrent is applied." (Paper No. 1 at 12.) As indicated, however, a diode meets these requirements. The specification expressly contradicts Appellant's argument on rehearing that the opening structure cannot be a diode.

Ukai also supports our construction of opening structures. Appellant has not contested our finding (Paper No. 18 at 4) that Ukai is directed to the same problem (see Ukai at 2:20-3:36), i.e., protecting display circuits from electrostatic discharge. Ukai uses coupling elements **42** in connection patterns between two guard rings **31**, **32** to protect display circuits from static electricity. (4:49-60.) The

coupling elements may be non-linear elements, e.g., diodes. (4:37-44.) As we noted in our decision (Paper No. 18 at 4), Appellant's brief on appeal did not address these non-linear elements. Ukai's diodes shunt static discharge from terminals **20** to the internal short circuiting bus **32**. As Appellant notes (Paper No. 19 at 1), however, the orientation of the diode determines whether the diode appears to be an open circuit or a short circuit in the presence of a high voltage. Claim 4 does not specify a direction in which the opening structure must be open, nor does it exclude an internal short-circuiting bus to which static discharge may be shunted as in Ukai.

Appellant belatedly refers to claim 13 on rehearing (Paper No. 19 at 2). Claim 13 was not separately argued in the original appeal nor is its use now consistent with Appellant's election to have the claims stand or fall together. The limitations of claim 13 cannot be read into the other claims. In any case, Appellant does not explain how the limitations of claim 13 are inconsistent with our construction of claim 4. Nothing in claim 13 excludes diodes, requires a fuse, or specifies any direction of conductance.

Fundamentally, we disagree with Appellant's construction of his claim. Appellant urges that

> the use of a diode that conducts in a given direction neither teaches nor suggests the use of a fuse that will conduct in neither direction upon the occurrence of an overcurrent condition but that will conduct in either direction prior to such an event.

(Paper No. 19 at 2.) Assuming, arguendo, the truth of that statement, it does not represent the entire scope of the subject matter that Appellant has claimed.

DECISION

Appellant's request on rehearing for withdrawal of our prior decision (Paper No. 18) is

DENIED

JAMES D. THOMAS Administrative Patent Judge	)
JERRY SMITH Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
RICHARD TORCZON Administrative Patent Judge	)

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