

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RODNEY RUESCH

Appeal No. 2003-1262
Application No. 09/620,679¹

HEARD: NOVEMBER 6, 2003

Before KRASS, DIXON and SAADAT, Administrative Patent Judges.
SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 7-10, 15, 16 and 23-25. Claims 1-6 and 17-22 have been withdrawn from consideration as being drawn to a non-elected invention. The Examiner has objected to claims 11-14 and has indicated their allowability if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

We reverse.

¹ Application for patent filed July 20, 2000.

Appeal No. 2003-1262
Application No. 09/620,679

BACKGROUND

Appellant's invention is generally directed to a driver for high speed data communication, and more specifically, to a method for matching the output impedance of a driver to the load of the interconnect lines. By matching the load, the voltage levels and the impedance remain substantially constant with variations in the manufacturing process, the voltage levels and the operating temperature. Representative independent claim 7 is reproduced below:

7. A method of communicating data in an integrated circuit using internal interconnects, the method comprising:

receiving a data signal;

adjusting a first resistance coupled to a first supply voltage, based on a manufacturing process, the first supply voltage and a temperature;

adjusting a second resistance coupled to a second supply voltage, based on the manufacturing process, the first supply voltage and the temperature; and

adjusting a third resistance coupled to the second supply voltage, based on the manufacturing process, the first supply voltage and the temperature.

The Examiner relies on the following references in rejecting the claims:

Knee et al. (Knee)	5,337,254	Aug. 9, 1994
Esch, Jr. (Esch)	6,118,310	Sep. 12, 2000 (filed Nov. 4, 1998)

Appeal No. 2003-1262
Application No. 09/620,679

Claims 7 and 23-25 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Knee.

Claims 8-10, 15 and 16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Esch.

We make reference to the answer (Paper No. 19, mailed November 26, 2002) for the Examiner's reasoning and to the appeal brief (Paper No. 18, filed September 25, 2002) and the reply brief (Paper No. 21, filed February 3, 2003) for Appellant's arguments thereagainst.

OPINION

With regard to the rejection of claims 7 and 23-25, Appellant's main point of argument is that Knee does not disclose a second supply voltage and "ground" cannot be properly interpreted as a supply voltage (brief, page 6). During the oral hearing, Appellant pointed to Figure 2A of the application and argued that the second supply voltage corresponds to V_{TT} 70 and, therefore, is clearly distinct from ground levels 64.

In response to Appellant's arguments, the Examiner asserts that zero volt at the ground is still a particular potential or a supply voltage that is higher than a negative voltage (answer, page 7). The Examiner apparently relies on the prior art and Appellant's disclosure depicting a logic circuit connected

Appeal No. 2003-1262
Application No. 09/620,679

between power lines V_{ss} (usually at 0 volt) and V_{TT} (usually higher than V_{ss}) (id.) to conclude that the first potential must be V_{TT} whereas the second potential is V_{ss} or the Ground (answer, page 8).

Before addressing the Examiner's rejection based on prior art, it is essential that we understand the claimed subject matter and determine its scope. Accordingly, as required by our reviewing court, we will initially direct our attention to Appellants' claim 7 in order to determine its scope. "[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). While, the limitation of "a second supply voltage" should be given its ordinary meaning, In re Etter, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985), it should also be interpreted as broadly as possible. Our reviewing court further reasons that the terms used in the claims bear a "heavy presumption" that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art. Texas Digital Systems Inc. v. Telegenix Inc., 308 F.3d 1193, 1202, 64 USPQ2d 1812, 1817 (Fed. Cir. 2002), quoting CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366, 62 USPQ2d 1658, 1662 (Fed. Cir. 2002). Additionally, a court will give a claim term the

Appeal No. 2003-1262
Application No. 09/620,679

full range of its ordinary meaning as understood by persons skilled in the relevant art, unless compelled otherwise. Texas Digital Systems, Inc., 308 F.3d at 1202, 64 USPQ2d at 1818. See also Rexnord Corp. v. Laitram Corp., 274 F.3d 1336, 1342, 60 USPQ2d 1851, 1854 (Fed. Cir. 2001).

Appellant's claim 7 requires a first resistance coupled to "a first supply voltage" while a second resistance and a third resistance are both coupled, not to a ground, but to "a second supply voltage." We are in agreement with Appellant's characterization of the term "a second supply voltage" as a voltage level, such as the V_{TT} in Figure 2A (oral hearing), which is different from the ground level which is actually a reference point by which the two different supply voltages are measured (brief, page 6).

A rejection for anticipation under section 102 requires that the four corners of a single prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation. See Atlas Powder Co. v. IRECO Inc., 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999); In re Paulsen, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

After a review of Knee, we agree with Appellant's assertion that the reference provides a plurality of inverter output stages 108, 110, 112 and 114 between a V_{DD} bus 116 and a ground bus 118 (Figure 3 and col. 5, lines 21-30) whereas claim 7 clearly requires each of the second resistance and the third resistance be coupled to a second supply voltage, distinct from the first supply voltage or the ground. In that regard, Knee merely provides for one supply voltage, V_{DD} bus 116, which can correspond only to the first supply voltage. Accordingly, Knee does not anticipate claims 7 and 23-25, and the 35 U.S.C. § 102 rejection of these claims over Knee cannot be sustained.

Turning now to the rejection of claims 8-10, 15 and 16, Appellant points out that Esch does not describe the selection of resistance for resistors 262 and 264, as shown in Figure 6 (brief, page 7). Appellant further argues that the reference merely teaches adjusting the output impedance and lacks the specific claimed step of selecting an edge rate of a driver coupled to the divider network based on the manufacturing process, supply voltage and the temperature (brief, page 8).

In response, the Examiner characterizes the selection based on 262 and 264 in Figure 6 of Esch as the claimed selection of a resistance of a divider network (answer, page 8). Additionally,

Appeal No. 2003-1262
Application No. 09/620,679

the Examiner considers the feature of "maintaining a substantially constant edge rate" to be inherent in Esch since "the output signal at pad 241 in Figure 4 is maintained at a constant edge by turning transistors 211-229" (answer, page 9).

After a review of Esch, we find that the Examiner's characterization of up/down counter 266 as "selection of an edge rate" is without evidentiary support since the counter actually adjusts the impedance of the PFET array to match to the external resistor by counting up or down to turn resistors of the array on or off (col. 9, lines 6-17). As pointed out by Appellant (oral hearing & brief, page 8), although the impedance matching of Esch may affect the edge rate, there is no teaching in Esch that, even implicitly, relates to the selection of an edge rate based on the recited variables. Therefore, the claimed steps of "selecting a resistance of a voltage divider network" and "selecting an edge rate of a driver coupled to the divider network," as recited in claim 8, would not have been prima facie anticipated by the voltage divider and the up/down counter arrangement in Esch. Accordingly, we do not sustain the 35 U.S.C. § 102 rejection of claims 8-11, 15 and 16.

Appeal No. 2003-1262
Application No. 09/620,679

CONCLUSION

In view of the foregoing, the decision of the Examiner rejecting claims 7-10, 15, 16 and 23-25 under 35 U.S.C. § 102 is reversed.

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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MAHSHID D. SAADAT)	
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Appeal No. 2003-1262
Application No. 09/620,679

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