

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL B. ANDERSON, KENNETH C.
SCHMITT AND DAVID M. WEBER

Appeal No. 1998-3035
Application No. 08/580,036

ON BRIEF

Before FLEMING, RUGGIERO, and BLANKENSHIP, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-26, all of the claims pending in the present application. An amendment after final rejection filed August 25, 1997 was approved for entry by the Examiner.

The claimed invention relates to a method and circuit for generating dual-phase clock signals from a single clock input.

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Appellants assert at pages 1 and 2 of the specification that, by eliminating the traditional approach of inverted feedback paths, high speed complementary clock signals can be generated having a low skew characteristic.

Claim 1 is illustrative of the invention and reads as follows:

1. A method for generating dual-phase clock signals, comprising the steps of:

generating a first clock signal by a first circuit having a first output;

generating a second clock signal by a second circuit having a second output;

establishing an out-of-phase relationship of about 180 degrees, between said first clock signal and said second clock signal, by a third circuit coupled between the first output and second output.

The Examiner relies on the following prior art:

Yoshizawa	59-97222	Jun. 05, 1984
(Published Japanese patent application)		
Nagasaki et al. (Nagasaki) ¹	1-117516	May 10, 1989
(Published Japanese patent application)		

Claims 1-26 stand rejected as being based on an inadequate disclosure under the first paragraph of 35 U.S.C. §

¹ Translations of Nagasaki and Yoshizawa accompany this decision.

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112. Claims 6 and 20-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over either Yoshizawa or Nagasaki.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief and Answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner, the arguments in support of the rejections and the evidence of obviousness relied upon by the Examiner as support for the prior art rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Brief along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the disclosure in this application fails to describe the invention as recited in claims 1-24 in a manner which complies with the requirements of 35 U.S.C. § 112. We reach the opposite conclusion with respect to claims 25 and 26. We

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are also of the view that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 6 and 20-24. Accordingly, we affirm-in-part.

We consider first the Examiner's 35 U.S.C. § 112, first paragraph, rejection of claims 1-26 for lack of enablement. In order to comply with the enablement provision of 35 U.S.C. § 112, first paragraph, the disclosure must adequately describe the claimed invention so that the artisan could practice it without undue experimentation. In re Scarbrough, 500 F.2d 560, 566, 182 USPQ 298, 305 (CCPA 1974); In re Brandstadter, 484 F.2d 1395, 1404, 179 USPQ 286, 293 (CCPA 1973); and In re Gay, 309 F.2d 769, 774, 135 USPQ 311, 316 (CCPA 1962). If the Examiner has a reasonable basis for questioning the sufficiency of the disclosure, the burden shifts to Appellants to come forward with evidence to rebut this challenge. In re Doyle, 482 F.2d 1385, 1392, 179 USPQ 227, 232 (CCPA 1973), cert. denied, 416 U.S. 935 (1974); In re Brown, 477 F.2d 946, 950, 177 USPQ 691, 694 (CCPA 1973); and In re Ghiron, 442 F.2d 985, 992, 169 USPQ 723, 728 (CCPA

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1971). However, the burden is initially upon the Examiner to establish a reasonable basis for questioning the adequacy of the disclosure. In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982); In re Angstadt, 537 F.2d 498, 504, 190 USPQ 214, 219 (CCPA 1976); and In re Armbruster, 512 F.2d 676, 677, 185 USPQ 152, 153 (CCPA 1975).

The Examiner has questioned the sufficiency of Appellant's disclosure in describing the manner of operation of the circuit arrangement illustrated, for example, in Appellants' Figure 3 which would result in the production of complementary out-of-phase clock signals as claimed. In the Examiner's analysis (Answer, page 4) of the operation of Appellants' described circuit, the complementary pulses from circuits 40 and 70, instead of producing the claimed complementary clock signals, will, in fact, cancel each other out.

After reviewing the arguments of Appellants and the Examiner, it is apparent that we have before us, in essence, conflicting interpretations of the operation of Appellants' disclosed clock circuitry. It is our view, however, that the Examiner's analysis at least reaches the threshold of

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reasonableness so as to shift the burden to Appellants to come forward with evidence to rebut the Examiner's position.

A review of Appellants' response on the record, however, reveals that, rather than presenting arguments and/or evidence challenging the Examiner's interpretation of the operation of the disclosed clock circuitry, such response instead merely reiterates their own interpretation by referencing various portions of their specification. No evidence, for example, in the form of a Rule 132 declaration suggested earlier in the prosecution by the Examiner as a possible avenue for resolving the disputed circuit operation interpretation, has been forthcoming from Appellants. In addition, we note that the Examiner has amplified his comments regarding the operation of Appellants' clock circuitry in the "Response to Arguments" portion of the Answer (pages 5 and 6). We do not have the benefit of Appellants' thoughts on the Examiner's comments since, rather than submit a Reply Brief, Appellants have chosen to let their position on the record stand based purely on arguments of counsel. The arguments of counsel, however, cannot take the place of evidence in the record. In re

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Schulze, 346 F. 2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F. 3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

For the above reasons, it is our opinion that since the Examiner's reasonable challenge to the sufficiency of Appellants' disclosure has not been overcome by any convincing arguments or evidence from Appellants, the Examiner's 35 U.S.C. § 112, first paragraph, rejection of claims 1-24, which specifically recite a phase relationship between generated clock signals, is sustained. The 35 U.S.C. § 112, first paragraph, rejection of claims 25 and 26 is not sustained, however, since these claims are directed solely to circuit structure with no claim limitations directed to the phase relationship between any generated clock signals.

We next turn to a consideration of the Examiner's 35 U.S.C. § 103(a) rejection of independent claims 6 and 20-24 as being unpatentable over either Yoshizawa or Nagasaki. These claims, which are directed to complementary clock signal generation, set forth limitations which require a particular relative skew value either at a specified operating frequency (claims 6 and 20) or with respect to a specified percentage of clock signal duty cycle (claims 21-24). As the basis for the

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obviousness rejection (Answer, page 5), the Examiner asserts the obviousness to the skilled artisan of adjusting the frequency of the clock signals in either Yoshizawa or Nagasaki to thereby arrive at the claimed particular relative skew value of the generated complementary clock signals.

In response, Appellants attack (Brief, page 8) the Examiner's assertions as to the interrelationship of skew and clock frequency. In Appellants' view, frequency and skew are different parameters and that, merely because a clock frequency can be altered, Appellants' specific claimed relative skew value would not necessarily follow. We agree. Although the Examiner suggests that any skilled artisan would recognize that a skew problem could be corrected by increasing the input clock signal frequency, such a suggestion is completely devoid of any support on the record. We are not inclined to dispense with proof by evidence when the proposition at issue is not supported by a teaching in a prior art reference, common knowledge or capable of unquestionable demonstration. Precedent of our reviewing court requires this evidence in order to establish a prima facie case. In re Knapp-Monarch Co., 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA

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1961); In re Cofer, 354 F.2d 664, 668, 148 USPQ 268, 271-72
(CCPA 1966).

It is further our view that, even assuming, arguendo, the correctness of the Examiner's assertion as to the recognition to the skilled artisan of a skew to clock frequency relationship, such fact alone does not address the issue of obviousness with respect to the specific limitations of appealed independent claims 6 and 20-24. Each of these claims sets forth a specific relative skew value in relation to either clock frequency or clock signal duty cycle. The Examiner has provided no indication as to how and in what manner the skilled artisan would have found it obvious to modify either of Yoshizawa or Nagasaki to arrive at the claimed invention. Further, since neither Yoshizawa or Nagasaki are concerned with a relative skew problem, we find lacking any motivation to attempt a modification in the first instance. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F. 2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992).

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Accordingly, since the Examiner has not established a prima facie case of obviousness, the rejection of independent claims 6 and 20-24 is not sustained.

In summary, with respect to the Examiner's 35 U.S.C. § 112, first paragraph, rejection, we have sustained the rejection of claims 1-24, but have not sustained the rejection of claims 25 and 26. We have also not sustained the Examiner's 35 U.S.C.

§ 103(a) rejection of claims 6 and 20-24. Therefore, the decision of the Examiner rejecting claims 1-26 is affirmed-in-part.

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

AFFIRMED-IN-PART

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MICHAEL R. FLEMING)	
Administrative Patent Judge)	
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JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
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DECISION: AFFIRMED-IN-PART
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s):

Prepared: August 14, 2001

Draft Final

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