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D E C I S I O N
of 14 February 2002

Case Number: W 0019/01 - 3.5.2

Application Number: PCT/DK 00/00382

Publication Number: -

IPC: H03M

Language of the proceedings: EN

Title of invention:
Sigma - delta modulator

Applicant:
Telital R&D Denmark A/S

Opponent:

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Headword:

-

Relevant legal provisions:

PCT Art. 17(3)(a)
PCT R. 13, 40.2

Keyword:

-

Decisions cited:

-

Catchword:

-



Case Number: W 0019/01 - 3.5.2
International Application No. PCT/DK 00/00382

D E C I S I O N
of the Technical Board of Appeal 3.5.2
of 14 February 2002

Applicant: Telital R&D Denmark A/S
Østre Allé 6
DK-9530 Støvring (DK)

Representative: Thomas Nielsen
Patentgruppen ApS
Aaboulevarden 23
DK-8000 Aarhus C (DK)

Subject of the Decision: Protest according to Rule 40.2(c) of the Patent Cooperation Treaty made by the applicant against the invitation (payment of additional fee) of the European Patent Office (International Searching Authority) dated 8 December 2000.

Composition of the Board:

Chairman: W. J. L. Wheeler
Members: R. G. O'Connell
B. J. Schachenmann

Summary of Facts and Submissions

I. International patent application PCT/DK00/00382 was filed with fourteen claims. Claim 1 is worded as follows:

"Sigma-delta modulator wherein delta is differential adapted to the input and/or output signal."

Claims 2 to 14 are dependent on claim 1.

II. The European Patent Office (EPO), acting as the International Searching Authority (ISA), issued a communication pursuant to Article 17(3)(a) PCT dated 8 December 2000 informing the applicant that the application did not comply with the requirement of unity of invention (Rule 13.1, 13.2 and 13.3 PCT) and invited the applicant to pay three additional fees. The annex to the invitation indicated the following as an essential part of the reasons:

"The invention according to claim 1 relates to a sigma-delta modulator wherein the signal delta is adapted to the input signal of the modulator circuit."

"The search has revealed that the sigma-delta modulator of claims 1 and 11 is not novel since it is disclosed in any of the following documents:

- D1) US 5 471 209 A
- D2) US 5 311 181 A"

On the basis of this finding, it was then reasoned that claims 8, 10 and 12 related to inventions which were not so linked as to form a "single general inventive

concept" according to PCT Rule 13.2 and that therefore, *a posteriori*, the application comprised 4 inventions not fulfilling the requirements for unity of invention.

- III. With a letter dated 5 January 2001, the applicant paid three additional fees under protest (Rule 40.2(c) PCT).
- IV. The ISA, pursuant to Rule 40.2(e) PCT, issued a communication dated 30 May 2001 informing the applicant that the ISA had reviewed the justification for the invitation to pay additional search fees and invited the applicant to pay a protest fee because the invitation was justified. The review panel confirmed the reasoned statement given in the invitation to pay and noted, *inter alia*, that the applicant had not contested the finding that claim 1 lacked novelty with regard to either of the two prior art documents cited.
- V. The applicant paid the protest fee and pointed out in a letter faxed on 2 July 2001 that claim 1 stated a "Sigma-delta modulator wherein delta is differential adapted to the input and/or output signal" and argued that the modulator according to claim 1 was new and involved an inventive step over the prior art according to D1 or D2, because in the prior art modulators delta was not varied differentially.
- VI. The applicant requests reimbursement of all the additional search fees and the protest fee.

Reasons for the Decision

- 1. The EPO Boards of Appeal have jurisdiction in this matter pursuant to Article 155(3) EPC.

2. The protest is admissible.
3. If, pursuant to Article 17(3)(a) PCT, the ISA invites the applicant to pay additional fees, it must, according to Rule 40.1 PCT, specify the reasons for which the international application is not considered as complying with the requirement of unity of invention.
4. The Board notes that in the reasons given in the ISA's invitation to pay additional fees, claim 1 of the present application was paraphrased thus: "The invention according to claim 1 relates to a sigma-delta modulator wherein ***the signal*** delta is [differential] adapted to the input [and/or output] signal of the modulator circuit." (Bold italics and square brackets mark insertions and deletions respectively in the ISA paraphrase vis-à-vis the actual wording of claim 1). It is an established principle of ordinary prudence in patent practice that a claim should not be paraphrased, since a conclusion which is true for the paraphrase may not be true for the claim. Nevertheless it has to be admitted that insofar as a paraphrase serves the purpose of declaring an interpretation of the claim, it enables a misinterpretation to be more easily detected.
 - 4.1 In the present case it appears that the term 'delta' has not been interpreted by the ISA in accordance with the way in which it is used in the present application, the description of which as filed includes at page 3, lines 22 to 28, the following definition: "It should moreover be noted that delta in a sigma-delta modulator represent the analogue quantisation step-size in the feed-back loop(s)." , and "According to the invention, delta defines the analogue step size of the analogue

feed-back(s) of the sigma-delta converter." By contrast, the use of the term "**signal** delta" in the ISA's paraphrase of claim 1 suggests rather the output signal of the D/A converter in the feedback loop (output signal of block marked A in Figures 1 and 6 of the drawings of the present application).

5. The ISA's invitation merely alleged that the search had revealed that the sigma-delta modulator of claim 1 was not novel since it was disclosed in D1 or D2, without any explanation. It is established jurisprudence of the EPO Boards of Appeal that a mere citation of documents accompanied by an assertion that the subject-matter of a claim is not new does not normally discharge the ISA's duty under Rule 40.1 PCT to specify the reasons; cf W 26/91, W 3/92 and W 3/96. In the present case, D1 and D2 appear to disclose systems in which the "**signal** delta" in the sense of the ISA's paraphrase is adapted by a loop filter but they do not appear to disclose systems in which 'delta' in the sense of quantisation step-size, ie as meant in claim 1, is adapted.
6. It is clear that the reasons given in the invitation to pay additional fees do not show that the subject-matter of claim 1 is not new. This remains true whether or not the applicant contested the finding that the subject-matter of claim 1 was not new.
7. For the above reasons the board finds the protest to be entirely justified within the meaning of Rule 40.2(e) PCT.

Order

For these reasons it is decided that:

The reimbursement of the three additional search fees and of the protest fee is ordered.

The Registrar:

The Chairman:

M. Hörnell

W. J. L. Wheeler