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D E C I S I O N
of 4 May 2006

Case Number: T 0078/02 - 3.5.04

Application Number: 95303079.8

Publication Number: 0692787

IPC: G11B 20/10

Language of the proceedings: EN

Title of invention:
Method and apparatus for retrieving data from a storage device

Applicant:
DISCOVISION ASSOCIATES

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 84

Keyword:
"Support in the description - no (missing essential features)"

Decisions cited:
T 0032/82, T 0409/91

Catchword:
-

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Case Number: T 0078/02 - 3.5.04

D E C I S I O N
of the Technical Board of Appeal 3.5.04
of 4 May 2006

Appellant: DISCOVISION ASSOCIATES
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 28 September 2001 refusing European application No. 95303079.8 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: F. Edlinger
Members: M. Paci
B. Müller

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division to refuse European patent application No. 95 303 079.8.

II. The decision under appeal was based on the grounds that independent claims 1 and 7 were unclear and lacked essential features (Article 84 EPC).

The examining division held that the wording of these independent claims lacked clarity because the expressions "partially integrating" and "partial integrator" had no well-established meaning in the context of data reading channels. Moreover, the phrase "integrating and bandpass filtering said playback signal simultaneously to result in a partially integrated signal" of independent claim 1 was regarded as not defining all the essential features of the "partial integration" necessary for achieving the intended technical effect of removing noise from the playback signal while maintaining a relatively rapid response time due in part to the high pass frequency boost provided by the band pass filter. Similar objections were raised against independent claim 7 with the additional remark that claim 7 did not contain the term "simultaneously".

III. With the statement of grounds of appeal, filed together with the notice of appeal, the appellant submitted a new set of claims comprising two independent claims 1 and 6 (based on claims 1 and 7 of the appealed decision) and requested "*that the Examining Division takes the new set of claims into consideration, according to the*

provisions of Article 109(1) EPC, as interpreted in the decision of the Board of Appeal T169/87".

IV. Independent claim 6 filed with the statement of grounds of appeal reads as follows:

"An apparatus for retrieving data stored on a medium (18) comprising:

- a reader (20) for reading said stored data and generating an input signal;
- an integrator and a low pass filter stage (232) connected to said input signal;
- a band pass filter stage (230) connected to said input signal;
- a substractor (234) connected to an output of said integrator and low pass filter stage (232) and to an output of said band pass filter stage (230), generating a combined signal;
- a threshold generator (236) connected to said combined signal;
- a data generator (210) connected to said combined signal and to said threshold generator, said data generator comprising a comparator (306);
- and a feedback path (362) from said comparator (306) to said threshold generator (236)."

Claims 7 to 12 are dependent on claim 6. Claim 1 and its dependent claims 2 to 5 have no decisive influence on this decision.

V. The appellant argued essentially as follows:

Clarity (Article 84 EPC)

Amended independent claim 6 is based on claims 7 and 11 as originally filed and on features disclosed on page 12, line 48, of the published application. The concept of "partial integration" has now been removed from the claims and replaced by a definition taken from the original application (see page 12, lines 46 to 53, and page 13, lines 34 to 40, of the published application, in connection with Figures 13 and 13B). It has now been specified that two signals are subtracted to obtain a "combined signal" which corresponds to the "partially integrated signal". The remark in the decision under appeal regarding the expression "simultaneously" is correct; the band pass filtering is done in parallel with the integration and low pass filtering, to result in the combined signal. The disputed wording has thereby been cancelled and replaced by a clear technical definition based on the content of the original application. Hence the reasons on which the contested decision was based are now void.

Essential features (Article 84 EPC)

The objections on this ground were not commented upon by the appellant.

VI. In an official communication annexed to the summons to oral proceedings the Board informed the appellant of its preliminary view that, *inter alia*, amended claim 6 had not clearly overcome all the objections raised in the appealed decision. Hence the examining division was

not obliged to grant interlocutory revision pursuant to Article 109(1) EPC and decision T 139/87 (OJ 1990, 68) - erroneously referred to by the appellant as T 169/87 - did not apply. The Board also indicated that it construed the appellant's request as meaning that the decision under appeal be set aside and that a patent be granted on the basis of the amended documents. Moreover, the Board informed the appellant of its intention to examine *ex officio* whether the amended claims met all the requirements of Article 84 EPC and drew his attention to several specific objections under this Article which might be raised against independent claim 6.

VII. In the letter dated 29 March 2006, the appellant informed the Board that he would not attend the oral proceedings. Neither amended claims nor arguments were submitted.

VIII. The Board held oral proceedings as scheduled on 4 May 2006 in the appellant's absence and announced its decision.

IX. As set out in the minutes of these oral proceedings, the Board construed the appellant's request to be that the decision under appeal be set aside and that a patent be granted on the basis of the following documents:

Description:
Pages 1 to 21 filed with the letter of 3 July 1998
Claims:
No. 1 to 12 filed with the notice of appeal (dated 20 November 2001)

Drawings:
Sheets 1/21 to 21/21 filed with the letter of 3 July 1998.

Reasons for the Decision

1. The appeal is admissible.

2. *Preliminary remarks*

The appellant did not comment on the objections set out in the official communication, did not amend claim 6 and chose not to attend the oral proceedings. At least some of these objections concerned non-compliances with the requirements of Article 84 EPC.

3. *Article 84 EPC - Support by the description (essential features)*

3.1 Article 84 EPC provides that the claims "*shall be clear and concise and be supported by the description*". According to the established jurisprudence of the boards of appeal, the requirement that the claims shall be supported by the description relates to the permissible extent of generalisation of the description. As a general rule, a feature which is described and highlighted in the application as being an essential feature of the invention must be a part of the independent claim or claims defining the invention (cf. decision T 409/91, OJ EPO 1994, 653, pt. 3.3). Essential features are in particular those which are necessary for achieving the technical effect or, expressed differently, for solving the technical

problem with which the application is concerned (cf. decision T 32/82, OJ EPO 1984, 354, pt. 15).

3.2 In the present case, the application describes the main technical effect of the invention as being to provide "*a method and device for reading stored data from a medium without suffering the undesirable effects of dc build-up, without creating unacceptable levels of noise or significant reducing timing margins and without the requirement of large amounts of overhead or derandomizing algorithms, while providing high data storage efficiency*" (see page 1, lines 42 to 45, of the description).

3.3 According to the description of the present application, this technical effect is achieved in two stages: **firstly**, the signal representing the data read from the medium is provided to a so-called "**partial integrator stage**" (208) for shaping the waveform in order to facilitate data recovery (see page 14, lines 47-48, and page 16, lines 5-7, of the description) and, **secondly**, the output of the partial integrator stage is provided to a **data generation stage** (210) which eliminates the DC component of the signal (see page 16, line 17, to page 17, line 44, of the description).

3.4 The first stage, called a "partial integrator" in the description, contributes to the aforementioned main technical effect by removing noise from the signal while maintaining a relatively rapid response time due to the high pass frequency boost provided by the band pass filter. According to the description (see page 15, line 50, to page 16, line 4; Figure 13), this is achieved if the input signal representing data stored

on the medium is connected to a **parallel** connection of, on the one hand, the band pass filter stage (230) and, on the other hand, the integrator and low pass filter stage (232). In this way the input signal is "simultaneously" band pass filtered and integrated and a "combined signal" (an output signal of a "partial integrator", as it was termed in original claim 7) is obtained by subtraction. This was accepted by the appellant in the statement of grounds of appeal.

3.5 The wording of claim 6 does not specify how these two stages (230) and (232) are connected to the input signal. Since the word "connected" does not unambiguously mean that the inputs of the two stages are "directly connected to said input signal", the wording of claim 6 covers other connections, including for instance a serial connection in which one stage would be connected to the input signal through the other stage. Since the alleged technical effect of noise reduction concomitant with a rapid response time as disclosed in the description is achieved by a parallel connection of the band pass filter stage (230) and the integrator and low pass filter stage (232) and since there is no support in the description for "partially integrating" the input signal by other means, this parallel connection constitutes **an essential feature** of the invention missing in independent claim 6.

3.6 As to the second stage, called a data generation stage (210) in the description, which eliminates the DC component of the signal output by the partial integrator stage (208), it is understood from Figures 15 to 17 and page 16, line 20, to page 18, line 3, of the description to operate as follows: a

threshold signal (334) is generated which tracks the DC component of the "partially integrated" signal. The threshold signal is obtained by taking the midpoint of stored positive and negative peak values of the signal. Moreover, a feedback loop (362) ensures that the stored positive and negative peak values track the envelope of the "partially integrated" signal.

3.7 Claim 6 does not indicate how the threshold generator determines the appropriate threshold. In fact, claim 6 does not even mention DC compensation. The above listed features of claim 6 are thus a mere structural definition which lacks features **essential** for achieving the intended technical effect of DC compensation.

3.8 Moreover, claim 6 gives the impression that the threshold generator (236) is separate from the data generator (210), which is inconsistent with the embodiments shown in Figures 13, 15 and 16. This inconsistency thus gives rise to a further objection of **lack of support** under Article 84 EPC.

3.9 In conclusion, independent claim 6 does not meet the requirement of support by the description of Article 84 EPC because it lacks essential features of the invention and stands in contradiction to substantial parts of the description and drawings.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Sauter F. Edlinger