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**D E C I S I O N**  
**of 8 November 2005**

**Case Number:** T 0206/05 - 3.5.03

**Application Number:** 01908437.5

**Publication Number:** 1312090

**IPC:** G11B 27/00

**Language of the proceedings:** EN

**Title of invention:**

Disc for use in an apparatus for signal processing, and such an apparatus

**Applicant:**

N2IT Holding B.V.

**Opponent:**

-

**Headword:**

Disc for use in an apparatus for signal processing/N2IT

**Relevant legal provisions:**

EPC Art. 54, 56, 111(1), 123(2)

EPC R. 67

**Keyword:**

"Inventive step (second auxiliary request) - yes"

"Violation of Guidelines: substantial procedural violation - no"

"Reimbursement of appeal fee - no"

**Decisions cited:**

T 0162/82, T 0042/84, T 0051/94, T 0937/97

**Catchword:**

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Case Number: T 0206/05 - 3.5.03

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.03  
of 8 November 2005

**Appellant:** N2IT Holding B.V.  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 17 September 2004  
refusing European application No. 01908437.5  
pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** A. S. Clelland  
**Members:** A. J. Madenach  
M.-B. Tardo-Dino

## Summary of Facts and Submissions

I. The present appeal is from a decision of the examining division to refuse patent application No. 01908437.5, filed on 26 January 2001 and claiming priority from NL application 1014526 of 29 February 2000. An international preliminary examination report was drawn up by the EPO on 12 December 2001.

The written decision was dispatched on 17 September 2004. This decision is a so-called decision according to the state of the file which in its grounds refers to communications under Article 96(2) EPC of 10 May 2004 and 29 December 2003. These communications raise objections of lack of inventive step (Article 56 EPC) of the subject-matter of independent claims 1 and 4 with respect to

D4: "The BeOS Bible", by S. Hacker, Peachpit Press, 1999, page 751,

which was submitted by the applicant with letter of 15 November 2002 received on 19 November 2002.

II. This decision was appealed with letter of 4 October 2004, received together with the appeal fee on 6 October 2004, the corresponding statement of grounds of appeal being received on 7 January 2005. The appellant requested that the decision under appeal be set aside and a patent be granted based on claims 1 to 7 filed as a main request, or on claims 1 to 7 of a first auxiliary request, or on claims 1 to 6 of a second auxiliary request, all claims of these requests having been filed with the grounds of appeal.

As an auxiliary measure, oral proceedings were requested.

The appellant furthermore requested reimbursement of the appeal fee.

By letter of 22 April 2005, the appellant asked for accelerated processing and referred in this respect to his corresponding submission during the examination procedure.

The set of claims according to the main request corresponds to the set of claims considered in the impugned decision.

III. On 11 May 2005 the board summoned the appellant to oral proceedings and issued an accompanying communication according to Article 11(1) of the rules of procedure of the Boards of Appeal.

IV. In reply to this communication, the appellant filed new arguments and introduced two further documents

D5: T. Inoue et al., "A Discrete Four-Channel Disc and Its Reproducing System (CD-4 System)", Manuscript received for publication by the Journal of the Audio Engineering Society on 25 March 1971.

D6: W. Diefenbach, "Hifihobby", page 29, publication date unknown.

V. Oral proceedings took place before the board on 8 November 2005. In essence the appellant maintained

his previous requests, with minor modifications in the second auxiliary request. He also requested in view of the request of 22 April 2005 for accelerated processing that the board exercise its discretion and act within the competence of the department of first instance (Article 111(1) EPC) as far as possible. At the end of the oral proceedings, the chairman announced the decision.

VI. Independent claim 1 of the main request reads as follows:

"Disc (1.1) for use in an apparatus for signal processing, which apparatus comprises a digital audio source (1.10) and a record player (1.6) with a turntable (1.5) and an arm (1.7) carrying a pick-up element (1.8) which is arranged to play a conventional record, which disc (1.1) can be placed on the turntable (1.5) and is provided with a groove which can be followed by the pick-up element (1.8), and which comprises a time-code signal wherein during use of the disc (1.1) the said time-code signal controls the digital audio source (1.10), characterized in that the time-code signal is modulated on a carrier frequency in the audible range between 20 and 20.000 Hz."

Independent claim 4 of the main request reads as follows:

"Apparatus for signal processing comprising a digital audio source (1.10) and a record player (1.6) with a turntable (1.5) and an arm (1.7) having a pick-up element (1.8) which is arranged for playing a

conventional record, wherein during use the pick-up element (1.8) provides a time-code signal (2.10) to control the digital audio source (1.10), characterized in that the pick-up element (1.8) feeds a digital filter (2.5, 2.6, 2.7) which has a circuit for detecting and following a carrier frequency, and a demodulation circuit for demodulating the time-code signal (2.10) that is modulated on the carrier frequency in the audible range between 20 and 20.000 Hz."

Independent claim 1 of the first auxiliary request comprises the following alternative characterising feature:

"the time-code signal is an absolute time-code signal that is comprised in the groove in a predetermined number [of?] subsequently arranged discrete steps."

Independent claim 4 of the first auxiliary comprises a corresponding alternative feature.

Independent claim 1 of the second auxiliary request comprises the following alternative characterising feature:

"the time-code signal is comprised in both the left and the right channel of the groove, having a mutual phase shift."

Independent claim 4 of the second auxiliary request comprises the following alternative characterising feature:

"the pick-up element (1.8) feeds a digital filter (2.5, 2.6, 2.7) which has a circuit for detecting and following a carrier frequency, and a demodulation circuit for demodulating the time-code signal (2.10) that is modulated on the carrier-frequency and that it has a detection device for determining the phase difference between the time-code signal (2.10) demodulated from a left and a right signal, respectively."

- VII. In the communications to which the impugned decision refers the examining division argued that the subject-matter of independent claims 1 and 4 differed from the disclosure of document D4 in that the time-code signal was modulated on a carrier frequency in the audible range between 20 and 20,000 Hz. However, since the disc was defined as being a conventional record which recorded signals in the audible range it was obvious for the skilled person to record any other signal onto such a disk in this range.
- VIII. The appellant agreed with the difference identified by the examining division with respect to D4 and argued that the examining division's finding of lack of inventive step was based on hindsight since document D4 pointed away from the invention in that it indicated that the positioning signals were inaudible signals. The examining division's argument that placing the positioning signals into the audible range was only one of two possibilities, i.e. the audible and inaudible range, was only valid if time-code signals were known to be either in the audible or in the inaudible range. There was also no teaching in D4 that the positioning signals were modulated onto any carrier frequency. It

was further argued, based on D5 and D6, that a conventional set-up of turn-table, pick-up element and amplifier was not necessarily exclusively restricted to transmission of signals in the audible range.

With respect to the alleged procedural violation and the request for reimbursement of the appeal fee, the appellant argued that the examining division violated procedural law in that in their first communication of 21 August 2003 following the earlier submission of D4 by the appellant they implicitly gave a positive opinion with regard to inventive step but surprisingly reversed this opinion in the subsequent communications of 29 December 2003 and 10 May 2004 on the basis of the same facts as before. In this connection, the appellant drew attention to the Guidelines, E-IX, paragraph 6.4.3 which stipulate that "if the international preliminary examination report has been drawn up by the EPO, it is to be regarded as an opinion for purposes of examination, and generally the first communication will only refer to the opinion expressed in the IPER. Such an opinion may be departed from if new facts relevant to assessing patentability are in evidence (e.g. if further prior art documents are to be cited or if evidence is produced of unexpected effects) or where the substantive patentability requirements under the PCT and the EPC are different."



## Reasons for the Decision

### 1. *Admissibility of amendments and clarity of claims*

1.1 In view of the decision with respect to novelty and inventive step as regards the subject-matter of the main and first auxiliary requests it has not been necessary to investigate in detail whether these requests comply with the other requirements of the EPC.

1.2 Claim 1 of the second auxiliary request is based on original claims 1 and 4. It is noted that original claim 4 refers back to original claim 3, which relates to the modulation onto a carrier frequency in the audible range. It follows, however, from original page 2, lines 35-39, that the invention as now claimed was also originally disclosed without this feature. Claim 4 of the second auxiliary request is based on original claims 5, 6 and 7. The dependent claims 2, 3, 5 and 6 of the second auxiliary request are based on original claims 2, 3, 8 and 9, respectively.

1.3 Independent claim 1 of the second auxiliary request relates to a disc for use in an apparatus for signal processing. The disc is in part defined in terms of features of the apparatus for which it can be used. Independent claim 4 of the second auxiliary request relates to an apparatus for signal processing to which a time code signal is provided by a pick-up element, which time code signal originates from the record being played on the record player.

Although in both claims the exact limitations imparted to the claimed disc and apparatus by the features relating to the apparatus and disc, respectively, are not fully clear the board accepts that these features are necessary to define the disc and apparatus, respectively.

1.4 The board is accordingly satisfied that the second auxiliary request satisfies the requirements of Articles 84 and 123(2) EPC.

2. *Novelty and inventive step, main request*

2.1 The invention according to claim 1 of the main request relates to a disc which, according to the main embodiment, is a vinyl disk (page 4, line 7) playable on a conventional turntable and with a groove containing as the only signal a time-code signal modulated onto a carrier frequency. This time code signal is demodulated and fed into a digital audio source (e.g. a CD-player). "Scratching" the disc (i.e. braking or accelerating disc movement by hand) modifies the demodulated time code in such a way that the digital audio source reproduces typical "scratching" effects obtained by scratching an analogue audio disc on the turntable in a similar way. The invention is characterised by the time-code signal being modulated on a carrier frequency in the audible range between 20 and 20,000 Hz.

2.2 The board considers D4 to constitute the closest prior art and notes that claim 1 is correctly delimited with respect to this document. The difference between the subject-matter of the claim and the teaching of D4 is

therefore the time-code signal being modulated on a carrier frequency in the audible range between 20 and 20.000 Hz. D4 is silent about the time-code signal being modulated onto a carrier.

2.3 During oral proceedings, the appellant convincingly argued on the basis of D5 and D6 and on general knowledge that record players which the skilled person would consider for use with a disk according to claim 1 are able to work also at frequencies above the audible range. Therefore, the term "traditional turntable" used in D4 should be understood to relate to record players also working at frequencies above the audible range. As a consequence, the problem to be solved by the characterising feature can no longer be seen in enabling the recording of a digital signal onto an analogue medium and in facilitating the manufacture and playing of the disc (see page 2, lines 20-25 of the original application), but rather in improving the resistance of the disc against wear and tear.

2.4 This problem is one of general concern in the art and its formulation does not, therefore, justify an inventive step.

The solution to this problem by modulating the time-code signal on a carrier frequency in the audible range between 20 and 20,000 Hz is obvious in view of the general knowledge in the art.

In the first place it is technically necessary that the positioning signals in D4, which are spaced at four clicks per millisecond, are modulated in some way in order to be recorded onto an analogue medium, i.e. the

vinyl disc, which is read via an analogue system comprising a standard turntable. Modulation onto a carrier frequency is a generally known way to do this and no inventive step can be seen in doing so.

Furthermore, it is well known in the art that the size of features formed on a traditional vinyl disc of the type considered for the purpose of the present invention scales down with increasing frequency of the signals they represent. This is made evident by Figure 16 of D5 which compares features on a disc for signals with a frequency up to 50 kHz (left side) with those for signals with a frequency up to 20 kHz (right side). As a consequence, and also well known in the art, the needle of the pick-up element must have reduced dimensions (see D5, page 167, right column, first paragraph) in order to be able to follow the reduced feature size and therefore be of high quality. It is commonplace that features on a record and needles of pick-up elements having small dimensions are more sensitive to wear and tear than larger features or needles. It is also obvious that pick-up elements of high quality with smaller needles are more expensive than those with larger needles. For these reasons the skilled person would seek to employ modulation frequencies low enough to avoid small size features and needles. As noted above D4 considers a time-code signal of four clicks per millisecond. The minimum carrier frequency onto which such a signal may be modulated depends on the actual modulation technique and lies in the order of 8 kHz. Therefore, the skilled person starting out from D4 would use a modulation frequency in the order of 8 kHz and, thus, remain well within the claimed frequency range.

2.5 The appellant argued that the term "**inaudible positioning signals**" (emphasis added by the board) in D4 indicated to the skilled person that the time-code signal had to be outside the audible range. The board considers this simply to mean "inaudible" when played using the set-up proposed in D4. The skilled person would not provide a direct connection from the turntable to the speakers while playing the disc with the time-code signal in such a set-up, since rendering the time-code signal audible would only produce noise.

2.6 In view of the above, the main request cannot be allowed since the subject-matter of claim 1 lacks an inventive step (Article 56 EPC).

3. *Novelty, first auxiliary request*

3.1 Independent claim 1 of the first auxiliary request has, with respect to claim 1 according to the main request, the following alternative characterising feature:

"the time-code signal is an absolute time-code signal that is comprised in the groove in a predetermined number [of?] subsequently arranged discrete steps."

3.2 It follows from D4 that the time code-signal is "spaced at four clicks per millisecond". This implies that the signal is "comprised in the groove in a predetermined number [of] subsequently arranged discrete steps". Furthermore, in D4 the time-code signal is referred to as "positioning signals". The unqualified term "positioning signals" is understood to refer to an

absolute position on the record and, thus, to an absolute time-code signal.

3.3 Since all features of claim 1 of the first auxiliary request are known from D4 this request cannot be allowed under Article 54 EPC.

4. *Novelty and inventive step, second auxiliary request*

4.1 Independent claim 1 of the second auxiliary request has, with respect to claim 1 according to the main request, the following alternative characterising feature:

"the time-code signal is comprised in both the left and the right channel of the groove, having a mutual phase shift."

This characterising feature solves the problem of allowing a quick determination of the direction in respect of the rotation of the disc (page 2, lines 35-39 and page 5, line 11-14 of the original application).

None of the cited documents discloses or suggests such a feature. D4 is the only document on file which discloses a conventional vinyl disc allowing in principle the use of left and right channels in the groove. D4 is, however, silent about left and right channels and the possible form of signals using such channels. It does not appear to the board that the skilled person would have any reason to provide such a feature in the disc of D4.

The subject-matter of claim 1 therefore involves an inventive step having regard to the disclosure of D4.

4.2 With respect to independent apparatus claim 4, the board concurs with the applicant that D4 discloses all features of the preamble of the claim.

It may remain open to discussion whether the features that the pick-up element feeds a digital filter which has a circuit for detecting and following a carrier frequency, and a demodulation circuit for demodulating the time-code signal that is modulated on the carrier-frequency, are obvious for the skilled person intending to put the teaching of D4 to work.

However, D4 is silent about the digital filter having a detection device for determining the phase difference between the time-code signal demodulated from a left and a right signal, respectively. For the same reasons already discussed for claim 1 under 4.1 above, it does not appear to the board that the skilled person would have any reason to provide such a feature in the disc of D4.

Therefore, the subject-matter of claim 4 also involves an inventive step over the cited prior art.

4.3 Claims 2, 3 and 5, 6 are dependent on claims 1 and 4. As a consequence, their subject-matter also involves an inventive step.

4.4 The board notes that the subject-matter of all claims of the second auxiliary request corresponds to that of various of the original claims which were subject to a search by the European Patent Office acting as the International Search Authority within the meaning of

chapter I of the Patent Cooperation Treaty. The search can, thus, be considered to encompass all subject-matter claimed in the second auxiliary request.

In view of the full search and the provision of amended application documents, the board concluded that the application according to the second auxiliary request fulfils all requirements of the EPC in addition to those according to Articles 84, 123(2), 54 and 56 EPC discussed above in detail.

5. *Request for reimbursement of the appeal fee*

- 5.1 The legal basis of the request for refunding the appeal fee put forward by the appellant is a violation of the Guidelines. According to the appellant he had a legitimate expectation after the communication of 21st August 2003 that the next step would be a communication under Rule 51(4)EPC announcing the grant of the patent because the Guidelines state at E-IX, paragraph 6.4.3 that the examining division can depart from the opinion expressed in the IPER only when new facts are brought forward.

The appeal being found partially allowable, the question arises as to whether or not this alleged violation amounts to the substantial procedural violation in the sense of Rule 67 EPC.

The board notes that, from a merely formal point of view, the provisions of the Guidelines E-IX, paragraph 6.4.3 as quoted by the appellant refer only to the first communication of the examining division under Article 96(2) EPC after a previous International



Preliminary Examination Report (IPER) issued by the EPO as International Preliminary Examination Authority. In the present case, the examining division followed this procedure in their first communication of 21 August 2003 which suggested to the appellant that a patent could be granted after appropriate amendments suggested in this communication and which the appellant performed with his submission of 13 November 2003. Only with the subsequent communications of 29 December 2003 and 10 May 2004 the examining division changed their position and raised further objections which eventually led to the refusal of the application.

It is true that the parties can expect the EPO to act in accordance with the Guidelines. But the Guidelines do not constitute legal provisions; they are intended to cover normal occurrences and should, therefore, only be considered as general instructions. The simple fact of departing from the general practice set out by the Guidelines does not in itself amount to a procedural violation, provided the examining division abides by the general rules and principles of the EPC (see for instance T 162/82, OJ 1987, 533; T 42/84, OJ EPO 1988, 251; T 51/94 not published; T 937/97 not published).

In other words, even if the Examining Division departs from the Guidelines a procedural violation can only arise if they violate a requirement of the EPC.

In the examination procedure, the examination according to Article 96(2) EPC is performed by the examiner entrusted with the examination as foreseen by Article 18(2) EPC. Only the final decision to grant a patent or to refuse the application is taken by the

examining division as a whole (Article 18(2) EPC). In these circumstances it can happen that an applicant receives a communication contradicting the previous communications even at a late stage of the examination procedure if the examining division as a whole does not support the opinion of the examiner entrusted with the examination (see also Guidelines C VI-2.4 and C VI-4.11).

It would be better of course if the examining division had maintained a consistent position but there is no legal basis in the EPC for considering that such a divergence in itself constitutes a procedural violation.

Since the examining division gave the applicant the opportunity to comment on the negative communications and to file further requests there was no injury to the right to be heard, Article 113(1) EPC, nor to any other general procedural principles.

Consequently the request for reimbursement of fee cannot be allowed.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent on the basis of:
  - claims 1 to 6 of auxiliary request (2) filed during the oral proceedings on 9 November 2005;
  - pages 2, 2a, 3, 5 of the description as amended during the oral proceedings on 9 November 2005, page 1 as filed with letter of 13 November 2003, page 4 as originally filed;
  - figures 1-3 as originally filed.

The Registrar:

The Chairman:

D. Magliano

A. S. Clelland