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Datasheet for the decision
of 7 June 2019

Case Number:	T 2017/13 - 3.5.07
Application Number:	04770229.5
Publication Number:	1676266
IPC:	G11B7/007, G11B7/0045
Language of the proceedings:	EN

Title of invention:
Method and recording apparatus for recording information on a
multi-layer disc

Applicant:
Koninklijke Philips N.V.

Headword:
Recording multi-layer disc/PHILIPS

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
Amendments - all requests - added subject-matter (yes)

This datasheet is not part of the Decision.
It can be changed at any time and without notice.

Beschwerdekammern

Boards of Appeal

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Case Number: T 2017/13 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 7 June 2019

Appellant: (Applicant)	Koninklijke Philips N.V. High Tech Campus 5 5656 AE Eindhoven (NL)
Representative:	de Haan, Poul Erik Philips International B.V. Philips Intellectual Property & Standards High Tech Campus 5 5656 AE Eindhoven (NL)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 9 April 2013 refusing European patent application No. 04770229.5 pursuant to Article 97(2) EPC**

Composition of the Board:

Chair	P. San-Bento Furtado
Members:	R. de Man
	M. Blasi

Summary of Facts and Submissions

I.   The present European patent application No. 04770229.5
        was filed on 12 October 2004 as international
        application PCT/IB2004/052058, published as
        WO 2005/036537, and claims the priority of European
        patent application No. 03103778.1, filed on 13 October
        2003.

II.   In the course of the appeal proceedings, following a
        request by the applicant (appellant) a change of its
        name from "Koninklijke Philips Electronics N.V." to
        "Koninklijke Philips N.V." was registered in the
        European Patent Register.

III.   The appeal lies from the decision of the Examining
        Division to refuse the present application for lack of
        novelty under Article 54(3) and (4) EPC 1973 of the
        subject-matter of a main request and five auxiliary
        requests.

        The lack-of-novelty objections were based on either of
        the following documents:
        D2:   EP 1 607 967 A1, published on 21 December 2005;
        D3:   EP 1 522 995 A2, published on 13 April 2005.

IV.   With the statement of grounds of appeal, the appellant
        filed claims according to a main request and first to
        sixth auxiliary requests. The main request and first to
        fifth auxiliary requests correspond to the requests not
        found allowable in the decision under appeal.

Each request has two sets of claims for different contracting states:
- set I, which is the same for all requests and consists of claims 1 to 12, for the contracting states AT, BE, BG, CH, CY, CZ, DK, EE, FI, GR, HU, IE, LI, LU, MC, PL, PT, RO, SE, SI, SK and TR;
- set II for the contracting states DE, ES, FR, GB, IT and NL.

The sets of claims essentially differ with respect to the following three features A/A', B and C:

(A)   "the information patterns (333) represent control information written in the initialization step are representing Error Correction Coded [ECC] blocks of control information";

(A') "the information patterns (333) representing control information written in the initialization step are representing ECC blocks of control information";

(B)   "the information patterns (333) representing control information written in the initialization step comprise dummy data consisting of all zeros";

(C)   "the finalization step further comprises recording part of the user information area not recorded with user information with the information patterns representing control information".

V.   In a communication accompanying a summons to oral proceedings, the Board expressed the preliminary opinion that feature A was not clearly defined and that features A and C added subject-matter to the content of the application as filed (Article 123(2) EPC).

The Board was of the preliminary view that documents D2 and D3 should be considered as comprised in the state of the art under Articles 54(3) EPC and 54(4) EPC 1973

with regard to the contracting states designated for sets II. Feature A, as far as it could be understood, seemed to be disclosed in document D3. Feature B did not seem to be disclosed in documents D2 and D3, relevant only with regard to novelty under Article 54(3) EPC 1973, but that feature did not seem to make a technical contribution. In view of the case law of the Boards of Appeal, it was not immediately clear whether feature B could establish novelty. Feature C did not seem to be disclosed in document D2 or D3.

The Board was also of the preliminary opinion that none of the requests satisfied the requirements of Articles 52(1) and 56 EPC because the subject-matter of claim 1 of set I did not seem to be inventive over the background art or related art acknowledged in the present application and in documents D2 and D3.

VI.		In a letter dated 10 January 2019, the appellant withdrew its request for oral proceedings and requested a decision according to the state of the file. The appellant made no submissions in reply to the Board's preliminary opinion.

VII.		With a communication dated 14 January 2019, the Board cancelled the oral proceedings.

VIII.		The appellant requests that the decision be set aside and that a patent be granted on the basis of the claims of the main request or of one of the first to sixth auxiliary requests filed with the statement of grounds of appeal.

IX.		Claim 1 of the main request and each of the first to sixth auxiliary requests for the contracting states AT, BE, BG, CH, CY, CZ, DK, EE, FI, GR, HU, IE, LI, LU, MC, PL, PT, RO, SE, SI, SK and TR (set I) reads as follows:

"Method of recording information on a multi-layer
optical record carrier, said record carrier comprising
at least two information layers and each of said
information layers comprising an inner control
information area, an user information area, and an
outer control information area, the method comprising
-    a first recording step of writing information
     patterns representing user information in the user
     information area of a first of said at least two
     information layers,
-    a subsequent second recording step of writing
     information patterns representing user information
     in the user information area of a second of said at
     least two information layers, and
-    a subsequent finalization step of writing
     information patterns representing control
     information in the inner control information areas
     and the outer control information areas of said
     first and second information layers,
characterized in that the method further comprises an
initialization step of writing information patterns
representing control information in at least one of the
inner control information area and the outer control
area of the second information layer, said information
patterns representing control information being written
adjoining the user information area of the second
information layer, and in that the initialization step
is located in time before the second recording step."

Claim 7 of set I (specifying feature C) reads as
follows:

"Method according to any of the claims 1 to 6,
characterized in that the finalization step further
comprises recording part of the user information area

not recorded with user information with the information patterns representing control information."

Claim 8 of set I (specifying feature A') reads as follows:

"Method according to any of the claims 1 to 7, characterized in that the information patterns (333) representing control information written in the initialization step are representing ECC blocks of control information."

X. Claim 1 of the main request for the contracting states DE, ES, FR, GB, IT and NL (set II of claims of the main request) reads as follows

"Method of recording information on a multi-layer optical record carrier, said record carrier comprising at least two information layers and each of said information layers comprising an inner control information area (311,321), an user information area (301,302), and an outer control information area (312,322), the method comprising
-   a first recording step of writing information patterns representing user information in the user information area of a first of said at least two information layers,
-   a subsequent second recording step of writing information patterns representing user information in the user information area of a second of said at least two information layers, and
-   a subsequent finalization step for ensuring that all information recorded in the user information areas on the various layers can be reliably read, and in the finalization write information patterns representing control information in the inner control information areas and the outer control information areas of said first and second

information layers such that all areas in the user
information area are preceded by an area comprising
information,
characterized in that the method further comprises an
initialization step of writing information patterns
(333) representing control information in at least one
of the inner control information area and the outer
control area of the second information layer, said
information patterns representing control information
being written adjoining the user information area of
the second information layer, and in that the
initialization step is located in time before the
second recording step, and in that
- the information patterns (333) represent *[sic]*
  control information written in the initialization
  step are representing Error Correction Coded [ECC]
  blocks of control information, and/or
- the information patterns (333) representing control
  information written in the initialization step
  comprise dummy data consisting of all zeros, and/or
- the finalization step further comprises recording
  part of the user information area not recorded with
  user information with the information patterns
  representing control information."

XI.   Claim 1 of the first auxiliary request for the
       contracting states DE, ES, FR, GB, IT and NL (set II of
       claims of the first auxiliary request) differs from
       claim 1 of the main request for the same contracting
       states in that the part of the claim after "the
       initialization step is located in time before the
       second recording step, and in that" reads as follows:

       - "the information patterns (333) represent *[sic]*
         control information written in the initialization
         step are representing Error Correction Coded [ECC]
         blocks of control information, and/or

- the information patterns (333) representing control
  information written in the initialization step
  comprise dummy data consisting of all zeros."

Claim 9 (specifying feature C) differs from claim 7 of
set I in that "according to any of the claims 1 to 6"
has been replaced with "according to any of the
preceding claims".

XII. Claim 1 of the second auxiliary request for the
      contracting states DE, ES, FR, GB, IT and NL (set II of
      claims of the second auxiliary request) differs from
      claim 1 of the main request for the same contracting
      states in that the part of the claim after "the
      initialization step is located in time before the
      second recording step, and in that" reads as follows:

      - "the information patterns (333) represent *[sic]*
        control information written in the initialization
        step are representing Error Correction Coded [ECC]
        blocks of control information, and/or
      - the finalization step further comprises recording
        part of the user information area not recorded with
        user information with the information patterns
        representing control information."

XIII. Claim 1 of the third auxiliary request for the
      contracting states DE, ES, FR, GB, IT and NL (set II of
      claims of the third auxiliary request) differs from
      claim 1 of the main request for the same contracting
      states in that the part of the claim after "the
      initialization step is located in time before the
      second recording step, and in that" reads as follows:

      - "the information patterns (333) represent *[sic]*
        control information written in the initialization
        step are representing Error Correction Coded [ECC]
        blocks of control information."

Claim 10 (specifying feature C) corresponds to claim 9 of the first auxiliary request for the same contracting states.

XIV.   Claim 1 of the fourth auxiliary request for the contracting states DE, ES, FR, GB, IT and NL (set II of claims of the fourth auxiliary request) differs from claim 1 of the main request for the same contracting states in that the part of the claim after "the initialization step is located in time before the second recording step, and in that" reads as follows:

- "the information patterns (333) representing control information written in the initialization step comprise dummy data consisting of all zeros, and/or
- the finalization step further comprises recording part of the user information area not recorded with user information with the information patterns representing control information."

Claim 9 (specifying feature A') differs from claim 8 of set I in that "according to any of the claims 1 to 7" has been replaced with "according to any of the preceding claims".

XV.   Claim 1 of the fifth auxiliary request for the contracting states DE, ES, FR, GB, IT and NL (set II of claims of the fifth auxiliary request) differs from claim 1 of the main request for the same contracting states in that the part of the claim after "the initialization step is located in time before the second recording step, and in that" reads as follows:

- "the information patterns (333) representing control information written in the initialization step comprise dummy data consisting of all zeros."

Claim 9 (specifying feature A') corresponds to claim 9
of the fourth auxiliary request for the same
contracting states.

Claim 10 (specifying feature C) corresponds to claim 9
of the first auxiliary request for the same contracting
states.

XVI.   Claim 1 of the sixth auxiliary request for the
contracting states DE, ES, FR, GB, IT and NL (set II of
claims of the sixth auxiliary request) differs from
claim 1 of the main request for the same contracting
states in that the part of the claim after "the
initialization step is located in time before the
second recording step, and in that" reads as follows:

-    "the finalization step further comprises recording
     part of the user information area not recorded with
     user information with the information patterns
     representing control information."

Claim 9 (specifying feature A') corresponds to claim 9
of the fourth auxiliary request for the same
contracting states.

XVII.   The text of the other claims is not pertinent to this
decision.

XVIII. The arguments of the appellant, where relevant to this
decision, are addressed below.

Reasons for the Decision

1.   The appeal complies with the provisions referred to in
Rule 101 EPC and is therefore admissible.

Invention

2.   The present application concerns a method of recording
        information on a multi-layer optical record carrier.
        The purpose of the invention is to allow the user
        information recorded directly after a layer jump to be
        read back reliably without the need for finalising the
        record carrier (see page 3, lines 20 to 23 of the WO-
        publication).

2.1   As explained in the description, in a dual-layer
        recordable disc the first Logical Block Address is
        physically located in the user information area (which
        corresponds to the "Data Zone" of ECMA-267) of the
        first information layer (layer L0) and the last Logical
        Block Address is located in the user information area
        of the second information layer (layer L1). During
        reading or recording, focusing of the radiation beam
        has to be changed from the first information layer to
        the second information layer in a so-called "layer
        jump" (page 2, lines 20 to 34). However, to be able to
        reliably read a block of information patterns from an
        area on an information layer, the block to be read has
        to be preceded by an area on the same information layer
        that also comprises information patterns. This
        preceding area is necessary to allow the system optics
        and electronics to settle. To ensure that the first
        block in each layer can also be read, a finalisation
        step is usually performed after recording all of the
        user information, in which information patterns
        representing control information are written in the
        inner and outer control information areas of each layer
        (page 3, lines 1 to 14).

2.2   The recording method of the invention comprises two
        recording steps of writing information patterns in two
        layers as well as initialisation and finalisation

steps. The object of the invention is achieved by
performing, before the second recording step, an
initialisation step of writing information patterns
representing control information in at least one of the
inner control information (in the case of parallel
track path, PTP) and the outer control (in the case of
opposite track path, OTP) areas of the second
information layer (page 3, lines 24 to 28). The control
information patterns may be all zeros or dummy data.
The amount of control information patterns may
correspond to one error correction coded (ECC) block
(page 4, lines 25 to 30; page 7, lines 1 to 10).

Added subject-matter

3.   *Features A and A' - all requests*

3.1   In its communication, the Board expressed its
        preliminary view that there was no basis for feature A
        in the application as filed.

        The appellant made no submissions in reply to the
        Board's preliminary opinion. In the first-instance
        proceedings, the appellant had provided, with its
        letter dated 24 January 2011, an alleged basis for
        feature A', which essentially corresponds to feature A.
        The appellant had argued that feature A' was disclosed
        on page 3, lines 29 and 30, which stated that in the
        initialisation step the control information could, for
        example, be a block of data, and on page 4, lines 28
        to 30, where it was explained that such a block was an
        ECC block of control information. In those lines, it
        was mentioned that the amount of control data in
        general corresponded to one ECC block. Hence the amount
        could also be more blocks.

        In addition to the passages on pages 3 and 4 cited by
        the appellant, in the following the Board considers the

other two passages of the application as filed which
refer to ECC blocks: original claim 4 and page 7, lines
7 to 10 of the description as filed.

3.2   The skilled person reads the phrase "information
patterns [...] are representing Error Correction Coded
[ECC]/ECC blocks of control information" of features A
and A' as specifying that the written information
patterns are (a plurality of) blocks of control
information coded for error correction. However, that
is not described in the application as filed.

3.2.1   Original claim 4 reads "the amount of information
patterns representing control information written in
the initialization step corresponds to one ECC block of
information". In contrast, features A and A' do not
refer to an amount and specify (a plurality of) ECC
blocks.

3.2.2   The passage on page 3 of the application as filed
mentions "for example a block of dummy data consisting
of all zeros". It does not refer to ECC coded control
information and the expression "for example" does not
unambiguously express that "the amount may also be more
[ECC] blocks", as argued by the appellant. This passage
can hence not serve as a basis for features A and A'.

3.2.3   The other two passages refer to a "minimal amount of
information patterns".

According to the description on page 4, lines 25 to 32,
"a minimal amount of control information [...] is
written in the initialization step", "[i]n general this
minimal amount corresponds to one ECC (Error Correction
Coded) block of control information" and "[i]n a DVD
type disc one ECC block holds 208 rows of 182 bytes".

The passage on page 7 states that "Preferably the amount of control information patterns 333 corresponds to one ECC block of control information. This is the minimum amount of control information that should be recorded [...]" (page 7, lines 7 to 10).

Both passages on pages 4 and 7 refer to the minimal amount that has to be written in the initialisation step, and explain that, in general, this minimal amount corresponds to one ECC block. These passages disclose the amount being a plurality of blocks only in combination with that amount being a minimal amount.

3.2.4   In sum, the application as filed describes only that the <u>amount</u> of information patterns representing control information written in the initialisation step corresponds to the size of <u>one</u> ECC block of information. By contrast, features A and A' specify that the information patterns represent (a plurality of) ECC blocks. Hence, features A and A' cannot be directly and unambiguously derived from the application as filed.

3.3   Feature A' is specified in claim 8 of set I and claim 9 of set II of each of the fourth to sixth auxiliary requests. Feature A is specified in claim 1 of set II of the main request and each of the first to third auxiliary requests. Consequently, the main request and each of the first to sixth auxiliary requests adds subject-matter to the content of the application as filed (Article 123(2) EPC).

4.   *Feature C – all requests*

4.1   Feature C specifies that the finalisation step further comprises recording part of the user information area not recorded with user information with the information patterns representing control information.

In its letter dated 24 January 2011, the appellant had cited page 7, lines 19 to 21 of the application as filed as a basis for feature C. This passage discloses that "the part of the user information area not recorded with user information is recorded with control information, as is shown in Figure 3D". Figure 3D shows that the whole user information area is recorded, one part with user information, the other with control information. However, the definition of feature C does not refer to "the part [...] not recorded", only to "part [...] not recorded".

In the Board's opinion, it cannot be directly and unambiguously inferred from the application as filed that, as specified by feature C, in the finalisation step only part of the user information area not recorded with user information can be recorded with control information.

4.2   Therefore, feature C and the claims in which it is included, i.e. claim 7 of set I, claim 1 of sets II of the main request and second, fourth and sixth auxiliary requests, claim 9 of set II of the first auxiliary request and claim 10 of sets II of the third and fifth auxiliary requests, infringe Article 123(2) EPC.

4.3   The appellant did not comment on the Board's communication pursuant to Article 15(1) RPBA in which the Board had raised preliminary objections under Article 123(2) EPC with regard to features A and C.

Conclusion

5.   Since none of the requests fulfils the requirements of
         Article 123(2) EPC, the appeal is not allowable. A
         decision on the other issues raised in the Board's
         communication pursuant to Article 15(1) RPBA is thus
         not necessary in order to take a final decision.

         The appeal is therefore to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

I. Aperribay   P. San-Bento Furtado

Decision electronically authenticated