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**Datasheet for the decision  
of 26 October 2011**

**Case Number:** T 0349/08 - 3.5.04  
**Application Number:** 98931035.4  
**Publication Number:** 1022728  
**IPC:** G11B7/00, G11B7/085, G11B20/10  
**Language of the proceedings:** EN

**Title of invention:**

OPTICAL DISC, ITS RECORDING METHOD, ITS RECORDING DEVICE, ITS  
REPRODUCING METHOD, AND ITS REPRODUCING DEVICE

**Applicant:**

Panasonic Corporation

**Headword:**

**Relevant legal provisions:**

EPC 1973 Art. 54(1)

**Keyword:**

Novelty (no)

**Decisions cited:**

**Catchword:**



Case Number: T0349/08 - 3.5.04

**D E C I S I O N**  
**of the Technical Board of Appeal 3.5.04**  
**of 26 October 2011**

**Appellant:** Panasonic Corporation  
(Applicant) 1006, Oaza Kadoma  
Kadoma-shi  
Osaka 571-8501 (JAPON)

**Representative:** Holmes, Miles Keeton  
Novagraaf International SA  
Chemin de l'Echo 3  
1213 Onex (SUISSE)

**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted 17 September 2007  
refusing European patent application  
No. 98931035.4 pursuant to Article 97(1)  
EPC 1973.**

**Composition of the Board:**

**Chairman:** F. Edlinger  
**Members:** C. Kunzelmann  
C. Vallet

## Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse European patent application No. 98 931 035.4.

II. The decision was based on the ground of lack of inventive step (Article 56 EPC 1973) of the optical disc according to claim 1 of each of the main and the three auxiliary requests, having regard to document

D1: DE 196 25 662 A1.

III. Claim 1 of the main request reads as follows:

"An recordable optical disc (1) having a concentric or spiral information track, comprising a first recorded area (4) in which information is recorded on the information track, and a second area (6) provided between the first recorded area (4) and a third area (5; 11), wherein

the second area comprises a recognition mark area (6d) indicating whether or not said first recorded area (4) is a last recorded area, according to whether a recording mark is recorded or is not recorded on the information track in the recognition mark area, the width of the recognition mark area (6d) being 2 tracks or less;

characterized in that:

the second area (6) further comprises a first buffer area (6b) and a second buffer area (6c) respectively provided before and after the recognition mark area (6d), wherein each of the first and second buffer areas (6b, 6c) has a width of 20 tracks or more and 100 tracks or less, and lead out information is

recorded on the information track in the first and second buffer areas (6b, 6c)."

Claim 1 of the first auxiliary request is claim 1 of the main request with the following feature added before the full step at the end:

", and wherein the third area is additionally recordable to form a new last recorded area".

Claim 1 of the second auxiliary request is claim 1 of the main request with the following feature added at the beginning of the characterising portion:

"the width of the recognition mark area (6d) is 0.45 tracks or more,".

Claim 1 of the third auxiliary request is claim 1 of the main request with both the above features added at the positions indicated.

Claim 5 of the main and the three auxiliary requests reads as follows:

"Apparatus configured to reproduce information from the recordable optical disc of claim 1, comprising:  
a rotating means for rotating said optical disc,  
an optical head (2) for irradiating said information track with a light beam generated from a light source,  
a retrieving means (8) for retrieving said recognition mark area (6d); and  
a reading means for determining whether a recording mark exists in said recognition mark area (6d) thereby to indicate whether or not the first recorded area (4) is the last recorded area;

characterized in that the retrieving means is configured to retrieve said recognition mark area between the first and second buffers areas (6b, 6c)."

IV. The reasons for the decision may be summarised as follows:

The optical disc of claim 1 of the main request differed from the disc of D1 in the presence of a first buffer area provided before the recognition mark area. This difference reduced the risk of unstable access operations. More particularly, it improved robustness in exchange for reduced recording capacity. Both the problem of avoiding unstable access operations and the provision of buffer areas were well-known in the art of optical disc recording. Furthermore, the person skilled in the art would recognise that there was a risk of unstable access operations also with the disc of D1, at least when reproduction was performed using a reproducing apparatus that was equipped only with Differential Phase Detection (DPD) servo-tracking, viz. a servo-tracking scheme used by most reproduction-only apparatuses.

Claim 1 of the first auxiliary request further specified a second buffer area which also reduced the risk of unstable access operations. This second buffer area was likewise common practice.

The further feature added in claim 1 of the second auxiliary request did not solve a technical problem.

Claim 1 of the third auxiliary request added the further features of claim 1 of the first and the second auxiliary request to claim 1 of the main request without providing any synergistic effect.

For the same reasons, *mutatis mutandis*, also the subject-matter of the remaining claims of all requests lacked an inventive step.

V. The applicant appealed and requested that the decision under appeal be set aside. Furthermore, the appellant requested oral proceedings as an auxiliary measure. With the statement of grounds of appeal, the appellant filed claims of all requests which, according to the appellant, were "identical to those on which the decision to refuse the application was based". The appellant requested that a patent be granted on the basis of these requests.

VI. The appellant's arguments submitted with the statement of grounds of appeal may be summarised as follows:

The invention had been devised by appreciating that a recognition mark area, which was located at the end of each data recording area and indicated whether the preceding data recording area was the last recorded data area on the recordable optical disc, might cause servo-tracking problems in reproduction-only apparatuses (as opposed to recording apparatuses). The reason for these problems was that most reproduction-only apparatuses used Differential Phase Detection (DPD) servo-tracking, viz. a low cost and easy to implement servo-tracking scheme. DPD required the presence of recorded information on the information track. The recognition mark area, however, might have no recording mark recorded therein. The first and second buffer areas specified in claim 1 avoided the potential servo-tracking problems of the limited-capacity servo-tracking systems of reproduction-only apparatuses. Thus the invention provided a disc format

which was extremely robust in terms of compatibility with reproduction-only apparatuses.

D1 related to the problem of synchronisation. D1 did not appreciate the servo-tracking problems for a reproduction-only apparatus and did not address any compatibility concerns between recording-capable and reproduction-only apparatuses. Starting from D1, the objective technical problem was how to improve compatibility of the disk of D1 with reproduction-only apparatus. The buffer areas provided on the disc according to the invention solved this problem. Even if a person skilled in the art had found that an empty recognition mark area might cause servo-tracking problems for a reproduction-only apparatus, the teaching of D1 would have motivated him to avoid any unwritten area in the partition area PA referred to in D1.

The different requests defined in varying detail the decoupling of the recognition mark area from the preceding data recording area on the recordable optical disc.

VII. The board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to a summons to oral proceedings dated 16 August 2011.

In this communication the board expressed doubts *inter alia* as to the novelty of the apparatuses specified in claims 3 and 5. The board questioned whether the spatial separation of the recognition mark area (6d) from the preceding data recording area (4) (and where applicable, from any succeeding recording area) by means of the first and second buffer areas (6b, 6c) on the recordable optical disc might serve to specify

distinguishing features in particular of the "Apparatus configured to reproduce information from the recordable optical disc of claim 1" specified in claim 5 of all requests.

Under point 1.3 the board expressed the following provisional opinion:

"It would also appear that a disk reproduction apparatus according to the precharacterising portion of claim 5 would be able to reproduce the information recorded on a recordable optical disk as specified in claim 1. One example of such a known recording device would appear to be a reproduction apparatus as disclosed [in] figure 1 and the corresponding description of D1. (This seems to be acknowledged in the present application, see page 3 of the present description.) In particular, the retrieving means specified in the precharacterising portion are functionally defined as being 'for retrieving said recognition mark area (6d)'. Thus it appears that these retrieving means would also be capable of retrieving the recognition mark area if the recognition mark area is located between two buffer areas, as specified in the characterising portion of claim 5. Also the statement of grounds of appeal indicates in point 2.8 that 'the present invention can provide a disk format that is extremely robust in terms of compatibility with reproduction-only apparatuses'. The board understands this statement to mean that conventional reproduction-only apparatuses are capable of reproducing the disk specified in claim 1 despite their limited-capability servo-tracking systems. Hence the board has doubts that the apparatus according to claim 5 is new (Article 54(1), (2) EPC 1973)."



- VIII. No amendments or observations were filed in response to the board's communication.
- IX. Oral proceedings were held by the board on 26 October 2011, in the appellant's absence, in application of Rule 71(2) EPC 1973 and Article 15(3) RPBA. At the end of the oral proceedings the chairman announced the board's decision.

### **Reasons for the Decision**

1. *Main request: novelty of the apparatus of claim 5 (Article 54(1) EPC 1973)*
- 1.1 D1 discloses in figure 1 and the corresponding description an apparatus configured to reproduce information from a recordable optical disc (see, for instance, column 4, lines 6 to 9). The apparatus comprises a rotating means (motor 2) for rotating the optical disc and an optical head (part of pickup 3) for irradiating the disc's information track with a light beam generated from a light source (laser 5; see column 4, lines 10 to 21). The apparatus also comprises a retrieving means for retrieving a recognition mark area (i.e. the "Partition-Bereich PA" comprising partition information, see column 6, line 61 to column 7, line 12 in conjunction with column 4, lines 36 to 68). Furthermore, the apparatus comprises a reading means for determining whether a recording mark (P) exists in said recognition mark area, to indicate whether or not a recorded area ("Informations-Schreibbereich DATA" being part of a "Kapitel" in D1; see column 3, lines 26 to 35) is the last recorded area (see column 7, lines 23 to 42 and column 6, lines 27

to 29). The location of the recognition mark area between the first and second buffer areas according to the disc as specified in claim 1 requires no change in the configuration of the reproduction apparatus of D1. Since the **disc** of the present application comprises buffer areas to solve a problem resulting from the use of a (conventional) reproducing apparatus that was only equipped with DPD servo-tracking, the characterising feature of claim 5 implies no modification of the reproduction apparatus of D1.

- 1.2 The board, in the communication accompanying the summons to oral proceedings, had expressed the view that, for the above reasons, the reproduction apparatus of claim 5, in particular its retrieving means, did not comprise distinguishing features over a conventional reproduction apparatus as disclosed in D1. The appellant did not file any observations. The board, having reconsidered whether the combination of the features of claim 5, in the light of the description and taking account of the appellant's arguments, implied distinguishing features by the reference to the disc of claim 1, did not find any. The board has therefore come to the conclusion that the apparatus of claim 5 of the main request is not new (Article 54(1) EPC 1973).

2. *First, second and third auxiliary requests: novelty of the apparatus of claim 5 (Article 54(1) EPC 1973)*

The same reasons as for the main request apply to the reproduction apparatus of claim 5 of each of the first, second and third auxiliary requests. These claims potentially differ only by their references to a differently specified optical disc. However, the present application as a whole does not give any

indication that any of these additional features of the optical disc, to which the apparatus claims refer, directly and unambiguously implies any change in the configuration or implementation of the reproducing apparatus. Nor did the appellant argue that there was any difference. Hence the finding as to lack of novelty (see Article 54(1) EPC 1973) of the apparatus of claim 5 of the main request is also valid for the apparatus of claim 5 of the auxiliary requests.

### **Order**

#### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:

K. Boelicke

F. Edlinger

Decision electronically authenticated