

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 November 2005 (17.11.2005)

PCT

(10) International Publication Number
WO 2005/109414 A1

(51) International Patent Classification⁷: **G11B 7/007**

(74) Agents: **KAWAMIYA, Osamu** et al.; AOYAMA & PART-
NERS, IMP Building, 3-7, Shiromi 1-chome, Chuo-ku, Os-
aka-shi, Osaka 5400001 (JP).

(21) International Application Number:
PCT/JP2005/008838

(22) International Filing Date: 10 May 2005 (10.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-140652 11 May 2004 (11.05.2004) JP

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except US): **MAT-
SUSHITA ELECTRIC INDUSTRIAL CO., LTD.**
[JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka,
5718501 (JP).

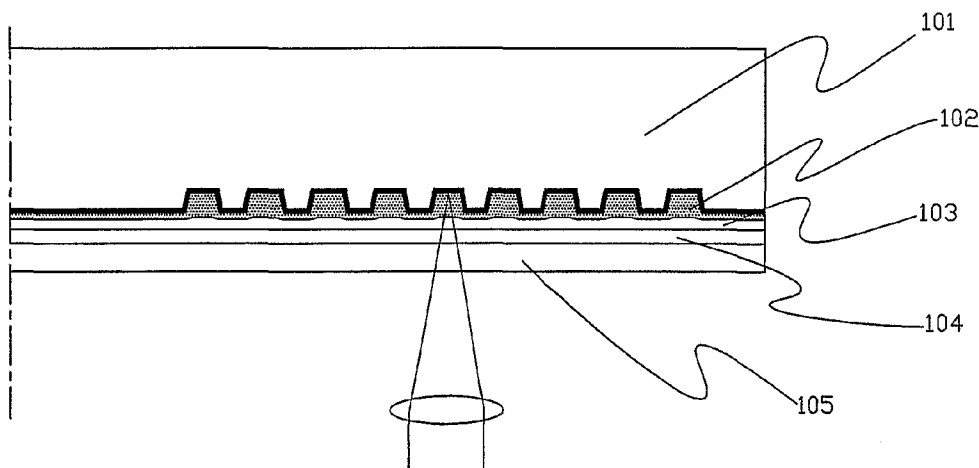
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ABE, Shinya.**
ISHIDA, Takashi.

[Continued on next page]

(54) Title: **WOBBLE INFORMATION RECORDING METHOD, INFORMATION RECORDING MEDIUM, AND RECORD-
ING AND REPRODUCTION METHOD AND APPARATUS THEREOF**



(57) Abstract: An optical disk and a method for identifying the optical disk are provided which make it possible to identify a recording system of the optical disk easily in a short time by a recording and reproduction apparatus when a groove-recording system and a land-recording system are both employed in one kind of optical disk, for example, a BD-R. Specifically, the polarity upon reproducing the wobble information is made to be the same in both of the optical disk of groove-recording system and the optical disk of land-recording system. The recording system of the optical disk that shows the same wobble polarity irrespective of the recording system can be easily detected by finding a tracking polarity that can recognize the wobble information by changing the tracking polarity, whereby the start-up time of the recording and reproduction apparatus can be shortened.

WO 2005/109414 A1

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.