

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 February 2002 (21.02.2002)

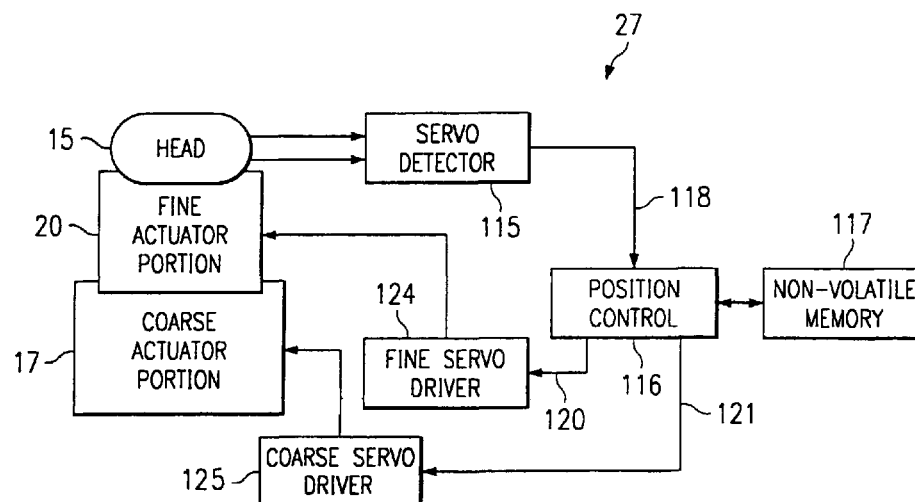
PCT

(10) International Publication Number
WO 02/15173 A1

- (51) International Patent Classification⁷: **G11B 5/58**, 21/10, 21/08, 5/584, 5/55
- (21) International Application Number: PCT/GB01/03063
- (22) International Filing Date: 6 July 2001 (06.07.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/641,135 16 August 2000 (16.08.2000) US
- (71) Applicant: **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, NY 10504 (US).
- (72) Inventors: **BUI, Nhan, Xuan**; 7402 E. 29th Street, Tucson, AZ 85710 (US). **KOSKI, John, Alexander**; 3752 N. Via de la Luna, Tucson, AZ 85749 (US). **SASAKI, Akimitsu**; Clover Hill Apt. D4, 2-29-4 Ekoda, Aoba-ku, Yokohama-shi, Kanagawa 225-0005 (JP). **TSURUTA, Kazuhiro**; 1-18-10-502 Higashirinkan, Sagami-hara City, Kanagawa 228-0811 (JP).
- (74) Agent: **BURT, Roger, James**; IBM United Kingdom Limited, Intellectual Property Law Dept., Hursley Park, Winchester, Hampshire SO21 2JN (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: METHOD AND POSITION CONTROL FOR A SERVO SYSTEM FOR POSITIONING A HEAD Laterally WITH RESPECT TO DEFINED SERVO TRACKS



(57) Abstract: A method and position control for a servo system for positioning a head laterally with respect to defined servo tracks. The servo system comprises a servo sensor and detector (115) for sensing lateral position of the head (15) and a compound actuator (14) having a fine actuator portion (20) and a coarse actuator portion (16). The position control (116) provides position indications for the coarse actuator portion (16), which may comprise a table relating predetermined nominal lateral position indications to the defined servo tracks. The position control (116) positions the coarse actuator portion (16) at an estimated position with respect to the defined servo tracks, and responds to the servo sensor to determine which servo track is closest to the estimated position. The position control (116) sets the coarse actuator portion (16) position indication to the predetermined nominal lateral position indication of the closest defined servo track, e.g., by looking it up in the table. This thereby corrects the indication of the position of the coarse actuator portion (16).



patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Published:

— *with international search report*

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.