* NO COVER LETTER

9802870-7

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G06F 17/30 — A1

(11) International Publication Number: WO 97/22068

(43) International Publication Date: 19 June 1997 (19.06.97)

(21) International Application Number: PCT/US96/19771

(22) International Filing Date: 10 December 1996 (10.12.96)

(30) Priority Data:
08/570,141 11 December 1995 (11.12.95) US

(71) Applicant: SEAGATE TECHNOLOGY, INC. [US/US]; 920 Disc Drive, Scotts Valley, CA 95066-4544 (US).

(71)(72) Applicant and Inventor: CHAMBERS, Barbara, L. [US/US]; 245 Mt. Herman Road #263, Scotts Valley, CA 95066 (US).

(74) Agent: HELLER, Edward, P., III; 920 Disc Drive, Scotts Valley, CA 95066-4544 (US).

(81) Designated States: DE, GB, JP, KR, SG.

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: SEQUENTIAL NUMERICAL INFORMATION ENCODER AND DECODER

(57) Abstract

A method of encoding position information (10) for a group of recording units on a recording medium having plurality of primary groups, with each primary group having N primary labels (40) and plurality of secondary groups, with each secondary group having M secondary labels (44). The primary labels (40) and secondary labels (44) are always in fixed sequence. The primary labels (40) and secondary labels (44) are combined such that for each position X, there is a unique combination of primary label and secondary label (11). Further, the value of Xth primary label (41) differs by the quotient of X/N from the value of corresponding secondary label of the secondary group (45) when the value of primary label is greater than or equal to the value of secondary label and the value of Xth primary label differs by M subtracted from the value of secondary label when the value of primary label is less than the value of secondary label.

10 POSITION INFORMATION DATA	11 POSITION INFORMATION CODE
0000	AMBER ALPHA
0001	BLUE BETA
0010	RED THETA
0011	GREEN DELTA
0100	YELLOW ALPHA
0101	AMBER BETA
0110	BLUE THETA
0111	RED DELTA
1000	GREEN ALPHA
1001	YELLOW BETA
1010	AMBER THETA
1011	BLUE DELTA
1100	RED ALPHA
1101	GREEN BETA
1110	YELLOW THETA
1111	AMBER DELTA

40 PRIMARY LABEL	41 VALUE	42 BINARY NUMBER
ALPHA	0	00
BETA	1	01
THETA	2	10
DELTA	3	11

44 SECONDARY LABEL	45 VALUE	46 BINARY NUMBER
AMBER	0	00
BLUE	1	01
RED	2	10
GREEN	3	11
YELLOW	4	100

51 INPUT	52 OUTPUT
ALPHA	00
BETA	01
THETA	10
DELTA	11
AMBER	00
BLUE	01
RED	10
GREEN	11
YELLOW	100

50