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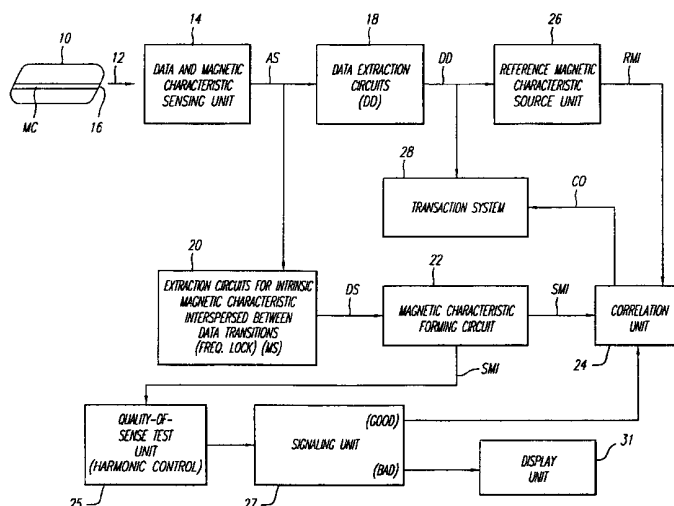
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- (71) Applicant: MAG-TEK, INC. [US/US]; 20725 South Analee Avenue, Carson, CA 90746 (US). (88) Date of publication of the international search report: 11 April 2002
- (72) Inventors: DELAND, Robert, S., Jr.; 4622 Bindewald Road, Torrance, CA 90505 (US). MCGEARY, Thomas, C.; 4230 The Strand, Manhattan Beach, CA 90266 (US). 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.

(54) Title: MAGNETIC STRIPE CARD VERIFICATION SYSTEM



(57) Abstract: Magnetic stripe documents are identified and authenticated on the basis of repeatable magnetic characteristics of a stripe recorded with digital data. Stripes are sensed to provide an analog signal, only a portion of which is used, specifically, the portion storing leading zeros. Cyclically, the leading zeros are sampled and digitized as a target number of samples using a frequency locked loop. The target number of samples for each zero is then reduced by a selection process that attains a predetermined number of digital samples that represent a magnetized portion of a leading zero, specifically, a space between data transitions. Groups of selected predetermined number of digital samples are then combined to provide a card magnetic characteristic identifier. The harmonic content of the characteristic identifier is tested as a measure of the quality of the stripe sensing. A predetermined level of quality conditions verification. Documents are verified by correlating reference and recent characteristic identifiers. Specific forms of sensor structures are utilized for the applications involving multitudes of different documents and sensor structures.



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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/12218

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G07D7/20 G06K7/08 G07F7/08 G07F7/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G07F G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 199 34 228 A (MAG TEK INC) 27 January 2000 (2000-01-27)	15
Y	claim 19; figures 9,10	2,4-14, 16-21
Y	EP 0 827 101 A (NCR INT INC) 4 March 1998 (1998-03-04)	2,4-14, 16-21
	claim 1; figure 2	
A	US 5 767 495 A (DELAND JR ROBERT S) 16 June 1998 (1998-06-16)	1-21
	claim 1; figure 3	
A	US 4 939 353 A (IIJIMA YASUO) 3 July 1990 (1990-07-03)	1-21
	claim 1; figure 7	
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/12218

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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