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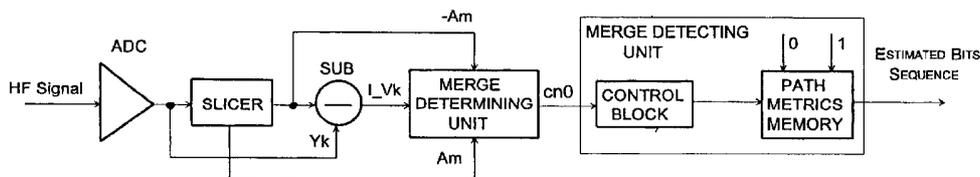
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MAXIMUM LIKELIHOOD DETECTOR



(57) Abstract: The present invention relates to a method and an apparatus to transform a signal received from a channel into a binary code sequence, and more particularly to a signal processing apparatus, which can perform the maximum likelihood detection of the reproduced data from an optical disk. A new algorithm is used, which has shown to be both, more precise than the known solution and independent of signal amplitudes. This procedure has the advantage that no selective amplification is necessary for Maximum Likelihood Detection. The general idea of the invention is described as follows: - known algorithms only work properly if (value >1), but not if the (value <1) - according to the invention: in case that (value <1), invert conditions are required - this will lead to correct results for value ><1 and sometimes to a wrong "first" result, which has no critical influence.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 02/09443

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H03M13/41 H04L25/03

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 H03M H04L

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	J.W.M. BERGMANS: "Digital Baseband Transmission and Recording" 1996, KLUWER ACADEMIC PUBLISHERS, DORDRECHT NL XP002238821 page 301, line 1 -page 372, last line page 365, paragraph 7.13 paragraph '7.6.1!	1-6
A	J.W.M. BERGMANS: "Solutions Manual to Accompany Digital Baseband Transmission and Recording" SOLUTIONS MANUAL, 'Online! 9 September 1998 (1998-09-09), pages 61-62, XP002238820 Retrieved from the Internet: <URL:http://www.wkap.nl/prod/a/solution_manual.pdf> 'retrieved on 2003-04-17! paragraph '7.13!	1-6

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *&* document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 02/09443

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WOOD R W ET AL: "VITERBI DETECTION OF CLASS IV PARTIAL RESPONSE ON A MAGNETIC RECORDING CHANNEL" IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE INC. NEW YORK, US, vol. 34, no. 5, 1 May 1986 (1986-05-01), pages 454-461, XP000577357 ISSN: 0090-6778 paragraph '000V!; figures 6,7 -----</p>	1-3
A	<p>EP 1 111 607 A (THOMSON BRANDT GMBH) 27 June 2001 (2001-06-27) page 2, line 1 -page 7, line 21 -----</p>	1-3

INTERNATIONAL SEARCH REPORT

Information on patent family members

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			US 2001034870 A1	25-10-2001
