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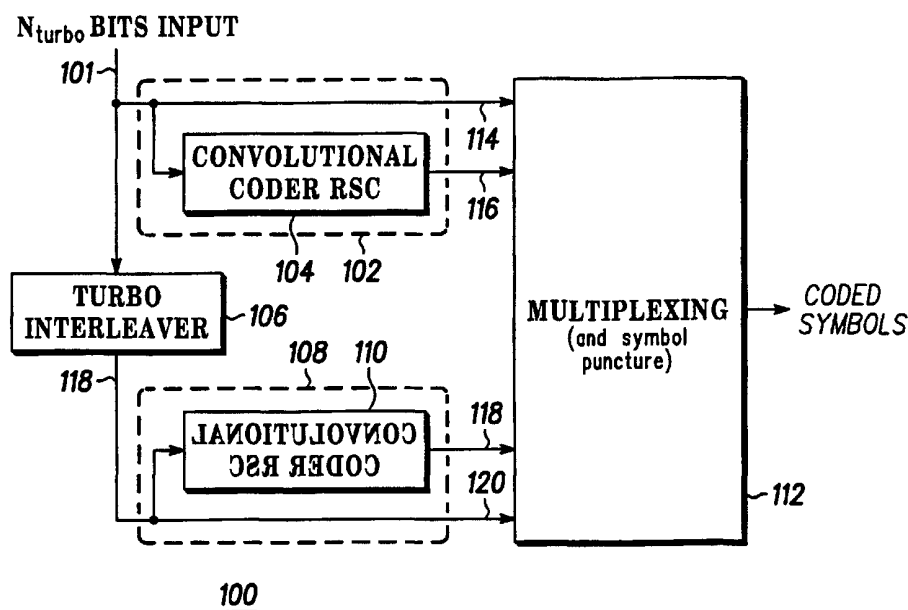
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(54) Title: APPARATUS AND METHOD FOR PROVIDING TURBO CODE INTERLEAVING IN A COMMUNICATIONS SYSTEM



(57) Abstract: A communication system (100) employs turbo encoding having a turbo interleaver (106) that interleaves input data (101) efficiently with little use of system resources. The turbo interleaver (106) reads address locations of the data bits into an interleaver matrix array (206) row by row and interleaves the address locations by bit reversal of the row indexes with accompanying permutation of the corresponding address locations in the rows of the matrix (206), bit reversal of the column indexes with accompanying permutation of the corresponding address locations in the columns of the matrix (206) and shifting the address locations within each row a predetermined number of column locations based on the particular row number.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/24470

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H03M13/27 H03M13/29

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

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, INSPEC, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00 35103 A (QUALCOMM) 15 June 2000 (2000-06-15) page 10, line 13 - line 28 ----	1,7
A	MOTOROLA: "Complexity analysis of the Motorola Turbo Code Interleaver" TSG-RAN WG 1 MEETING #3, 22 - 26 March 1999, pages 1-5, XP002194524 Eskilstuna, SW figure 1 ----- -/--	1,7

Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

<p>*A* document defining the general state of the art which is not considered to be of particular relevance</p> <p>*E* earlier document but published on or after the international filing date</p> <p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>*O* document referring to an oral disclosure, use, exhibition or other means</p> <p>*P* document published prior to the international filing date but later than the priority date claimed</p>	<p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*G* document member of the same patent family</p>
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Date of the actual completion of the international search 27 March 2002	Date of mailing of the international search report 15/04/2002
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Van Staveren, M
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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NORTEL NETWORKS: "Comparison of Turbo Interleavers for 3GPP" TSG-RAN WG 1 MEETING #2, 22 - 25 February 1999, pages 1-9, XP002194525 Yokohama, JP page 2, line 1 -page 8, last line -----	1,7

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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		US 6304991 B1	16-10-2001
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		EP 1147614 A1	24-10-2001
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		US 2002032890 A1	14-03-2002
