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Declaration under Rule 4.17:

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations*

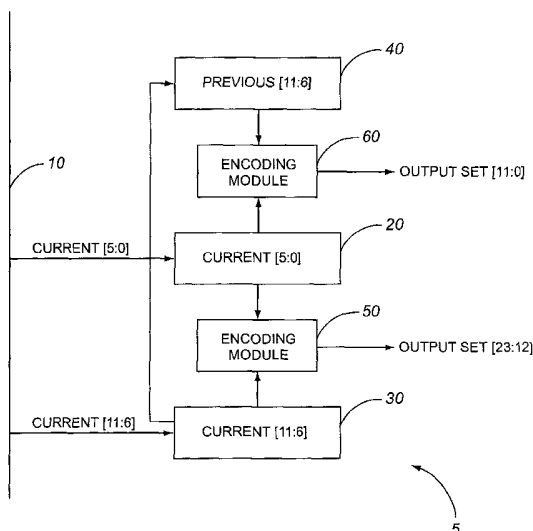
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(54) Title: PARALLEL CONVOLUTIONAL ENCODER



(57) **Abstract:** Methods and devices for encoding in parallel a set of data bits for use in communications systems. The set of data bits to be encoded is divided into two subsets with the first subset being encoded in parallel using the second subset. The first subset is also encoded in parallel using the second subset. The first subset is also encoded in parallel using a subset of an immediately preceding set of data bits. Parallel encoding is realized by using an encoding module utilizing multiple single bit submodule. Each submodule receives a single bit from the first subset and either the second subset or the subset of the immediately preceding data set. Each single bit submodule produces a pair of output bits from the convolutional encoding of a single bit of the first subset and either the second subset of the subset of the immediately preceding data set. The multiple single bit submodules operate in parallel to simultaneously and collectively produce a set of data bits.

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INTERNATIONAL SEARCH REPORT

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PCT/CA 03/01133

A. CLASSIFICATION OF SUBJECT MATTER

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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, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 182 265 B1 (KIM KYUNG SOO ET AL) 30 January 2001 (2001-01-30) column 3, line 53 -column 5, line 2; figure 4	1-4
A	--- EP 1 176 727 A (TRW INC) 30 January 2002 (2002-01-30) column 4, paragraph 12 -column 5, paragraph 15; figure 2	1-20
A	--- M'SIR A ET AL: "A high speed encoder for recursive systematic convolutive codes" PROC., EIGHTH IEEE INTERNATIONAL ON-LINE TESTING WORKSHOP (IOLTW'02), 8 - 10 July 2002, pages 51-55, XP010601405 the whole document --- -/--	1-20

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

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

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

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.

Z 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

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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	MATSUSHIMA T K ET AL: "Parallel encoder and decoder architecture for cyclic codes" IEICE TRANSACTIONS ON FUNDAMENTALS OF ELECTRONICS, COMMUNICATIONS AND COMPUTER SCIENCES, INSTITUTE OF ELECTRONICS INFORMATION AND COMM. ENG. TOKYO, JP, vol. 79, no. 9, September 1996 (1996-09), pages 1313-1323, XP000679621 ISSN: 0916-8508 the whole document -----	1-20
A	HACCOUN D ET AL: "New architectures for fast convolutional encoders and threshold decoders" IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, IEEE INC. NEW YORK, US, vol. 6, no. 3, April 1998 (1998-04), pages 547-557, XP000879638 ISSN: 0733-8716 the whole document -----	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6182265	B1	30-01-2001	KR 248396 B1	15-03-2000
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			CA 2351599 A1	28-12-2001
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