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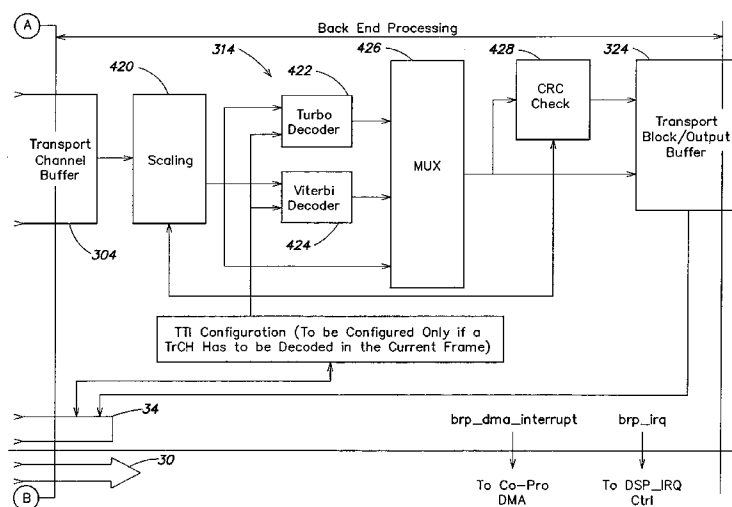
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(54) Title: RE-QUANTIZATION IN DOWNLINK RECEIVER BIT RATE PROCESSOR



(57) Abstract: A bit rate processor in a wireless system includes a front end processor to process physical channel data and to generate encoded transport channel data, a transport channel buffer to hold the encoded transport channel data, and a back end processor to process the encoded transport channel data from the transport channel buffer and to generate decoded transport channel bits. The front end processor may include a frame buffer that receives the physical channel data, a first stage to de-map the physical channel data from the frame buffer, an intermediate frame buffer that receives the de-mapped physical channel data from the first stage, and a second stage to process the de-mapped physical channel data and to provide the encoded transport channel data. The back end processor may include a third stage, including a scaling circuit to scale the encoded transport channel data, a decoder to decode the scaled transport channel data and a CRC checker to provide the decoded transport channel bits, and an output buffer to receive the decoded transport channel bits.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 02/37698 A (QUALCOMM INC [US]) 10 May 2002 (2002-05-10) page 2, line 36 - page 3, line 3 page 6, line 35 - page 8, line 6; figure 2b page 29, line 21 - page 30, line 32; figure 11	1-24
Y	EP 1 248 402 A (SONY CORP [JP]) 9 October 2002 (2002-10-09) paragraphs [0007], [0016], [0028], [0035] - [0038]; figure 2	1-24

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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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
WO 0237698	A	10-05-2002	AR 031297 A1	17-09-2003
			AU 3252202 A	15-05-2002
			EP 1334568 A2	13-08-2003
			MX PA03003970 A	12-02-2004
			TW 586283 B	01-05-2004
			US 6798826 B1	28-09-2004
EP 1248402	A	09-10-2002	CN 1401168 A	05-03-2003
			WO 0249251 A1	20-06-2002
			JP 2002185430 A	28-06-2002
			US 2003091130 A1	15-05-2003