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Jin et al.

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(54) **SERIAL CONCATENATION OF INTERLEAVED CONVOLUTIONAL CODES FORMING TURBO-LIKE CODES**

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Related U.S. Application Data

(63) Continuation of application No. 09/861,102, filed on May 18, 2001, now Pat. No. 7,116,710, and a continuation-in-part of application No. 09/922,852, filed on Aug. 18, 2000, now Pat. No. 7,089,477.

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(51) **Int. Cl.**
   H04L 5/12   (2006.01)

(52) **U.S. Cl.** **375/262**; 375/265; 375/348; 714/755; 714/786; 714/792; 341/52; 341/102

(58) **Field of Classification Search** 375/259, 375/262, 265, 285, 296, 341, 346, 348; 714/746, 714/752, 755, 756, 786, 792, 794–796; 341/51, 341/52, 56, 102, 103
   See application file for complete search history.

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(57) **ABSTRACT**

A serial concatenated coder includes an outer coder and an inner coder. The outer coder irregularly repeats bits in a data block according to a degree profile and scrambles the repeated bits. The scrambled and repeated bits are input to an inner coder, which has a rate substantially close to one.

23 Claims, 5 Drawing Sheets
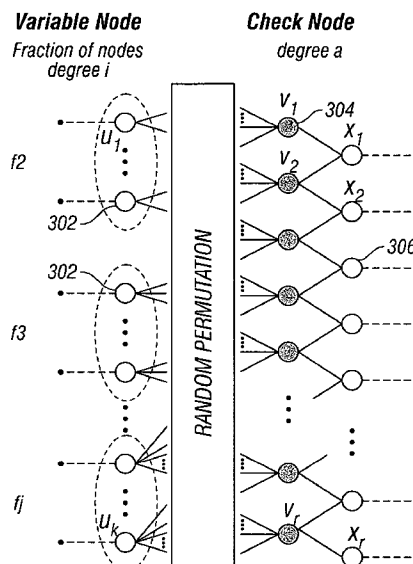
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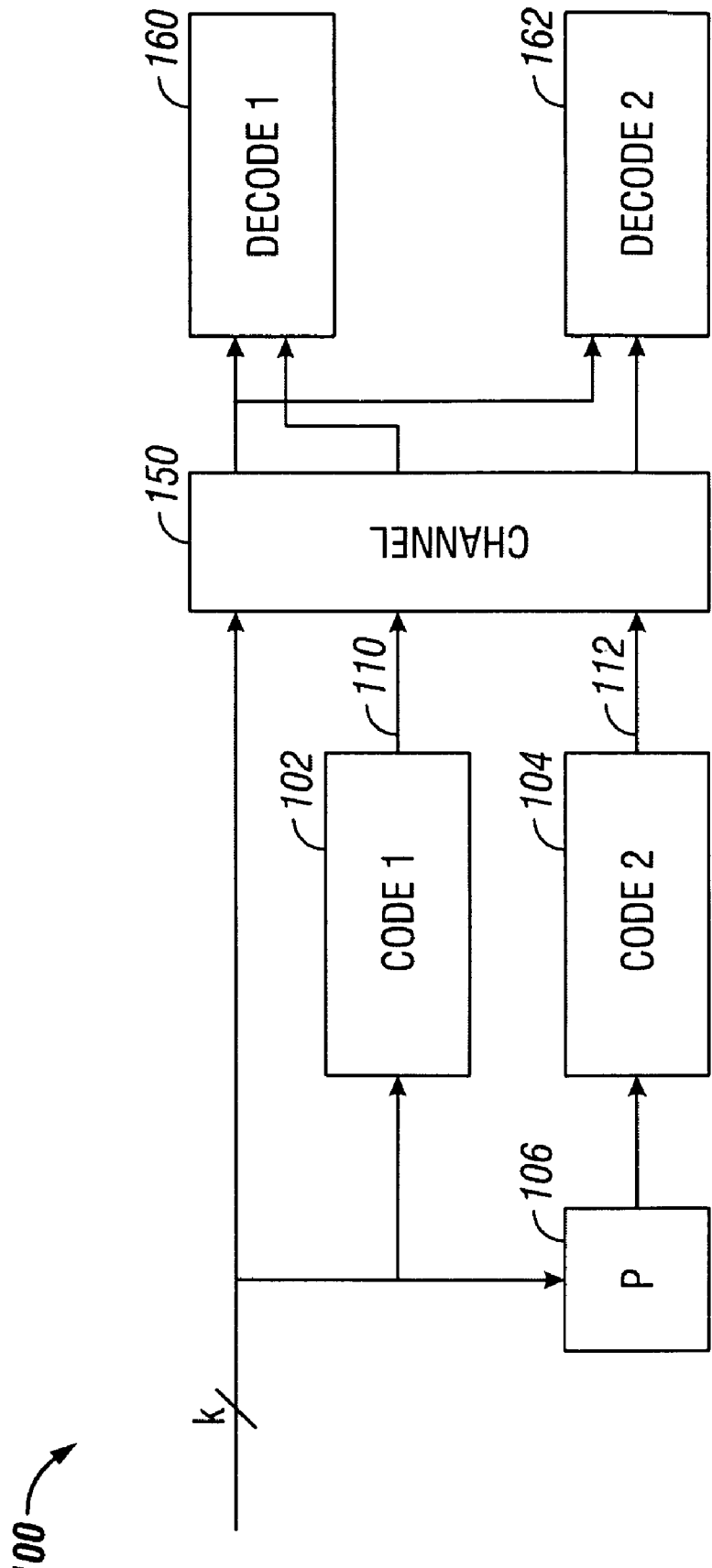
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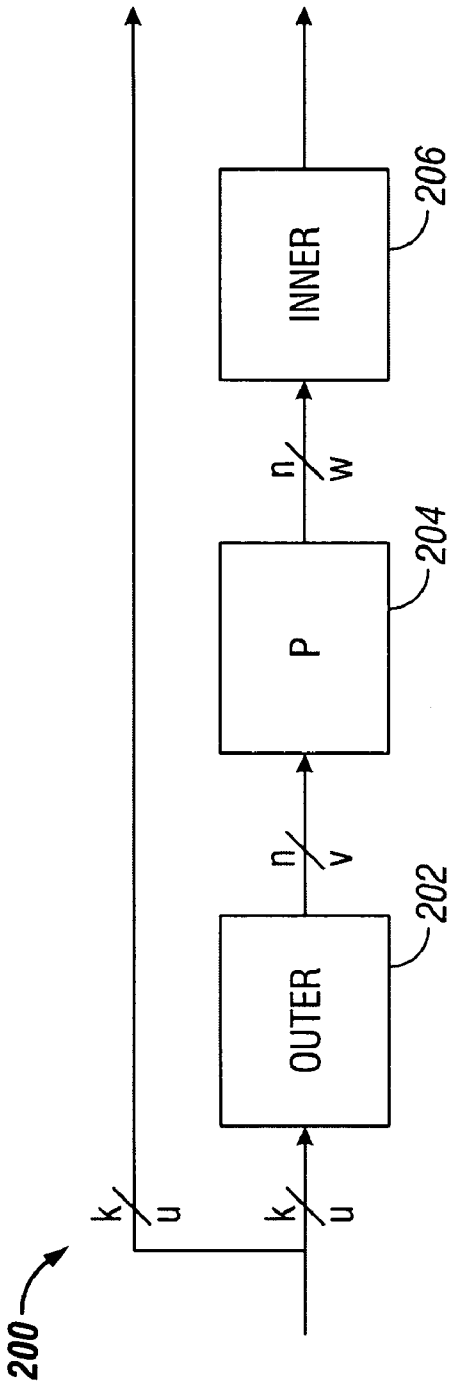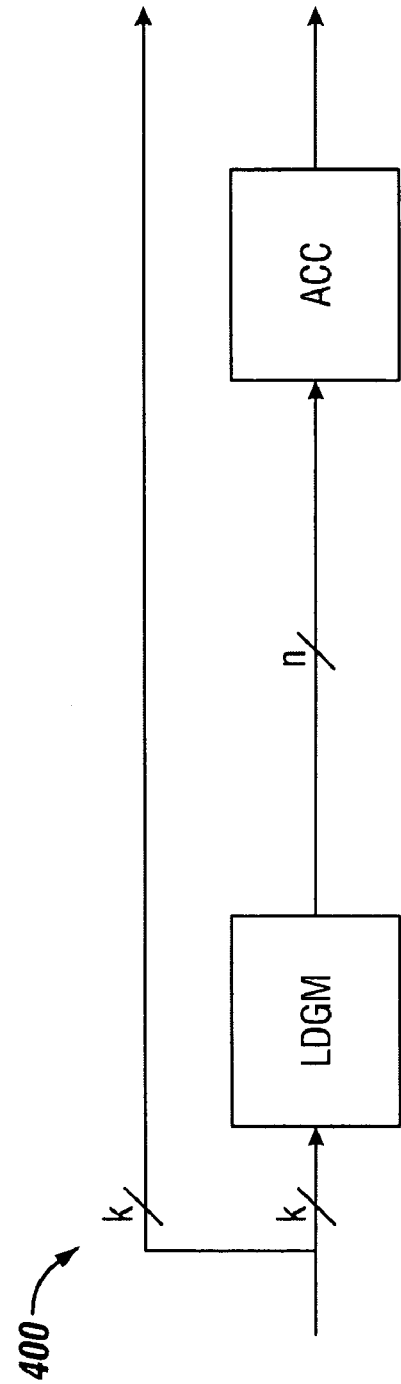
FIG. 1
(Prior Art)

FIG. 2

FIG. 4

FIG. 3

DOCKET ALARM
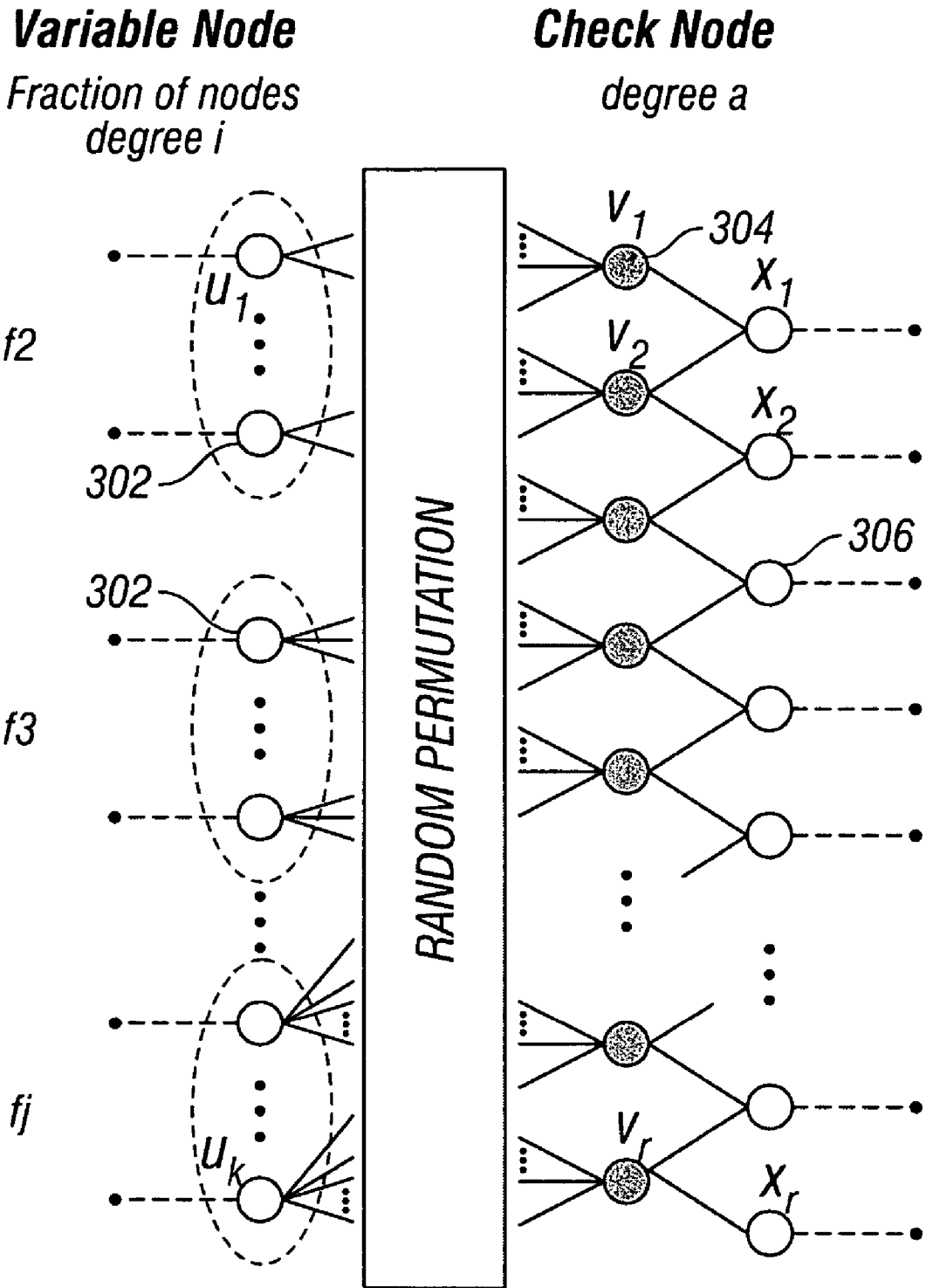
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