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(54) **EARLY CONVERGENCE FOR DECODING OF LDPC CODES**

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(57) **ABSTRACT**

Low-density parity-check (LDPC) encoded data with one or more errors is received. Information associated with an early convergence checkpoint that occurs at a fractional iteration count that is strictly greater than 0 and strictly less than 1 is received. The information associated with the early convergence checkpoint is used to perform LDPC decoding on the LDPC encoded data up to the early convergence checkpoint and generate a decoded codeword, wherein the early convergence checkpoint is prior to a first complete iteration of the LDPC decoding. At the early convergence checkpoint that occurs at the fractional iteration count, it is determined whether the LDPC decoding is successful and in the event it is determined that the LDPC decoding is successful, the decoded codeword is output.