Title (en)

CHECK-IRREGULAR LDPC CODES FOR UEP

Title (de)

IRREGULARITÄTSPRÜFUNG VON LDPC-CODES FÜR UEP

Title (fr)

CODES DE CONTRÔLE IRRÉGULIERS LDPC POUR UEP

Publication

EP 1992072 A1 20081119 (EN)

Application

EP 07704196 A 20070129

Priority

- EP 2007050842 W 20070129
- EP 06100979 A 20060127
- EP 07704196 A 20070129

Abstract (en)

[origin: WO2007085653A1] Data, especially when it is source coded multimedia information (video, speech, audio), often should be protected differently, since the effects of errors would lead to disturbances of different susceptibility. So-called "Unequal Error Protection (UEP) codes" are a suitable tool to protect data according to quality requirements or importance levels. Low-Density Parity-Check codes are generally known to be (almost) capacity-achieving. The common understanding was that they can be constructed to offer UEP properties by using different connection degrees at the bit-node side of the describing bi-partite Tanner graph. Involving a bit node into more checks, i.e., connecting it to more check nodes would improve the protection. However, the reliabilities of all bits grow with the number of iterations and the UEP properties finally disappear with the number of iterations. The invention proposes a method for the transmission of data of different sensitivities and realizes unequal error protection by an unequal distribution of connections (edges) to check nodes, representing the parity-check equations in the Tanner graph.

IPC 8 full level

H03M 13/11 (2006.01)

CPC (source: EP)

H03M 13/1148 (2013.01); **H03M 13/356** (2013.01); **H03M 13/618** (2013.01)

Citation (search report)

See references of WO 2007085653A1

Cited by

US2019165812A1; US10778249B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2007085653 A1 20070802; EP 1992072 A1 20081119

DOCDB simple family (application)

EP 2007050842 W 20070129; EP 07704196 A 20070129