Title (en)

Optimization of MP3 encoding with complete decoder compatibility

Title (de)

Optimierung von MP3-Kodierung mit vollständiger Dekodiererkompatibilität

Title (fr)

Optimisation de codage MP3 avec compatibilité complète de décodeur

Publication

EP 2192577 A1 20100602 (EN)

Application

EP 08170396 A 20081201

Priority

EP 08170396 A 20081201

Abstract (en)

An iterative rate-distortion optimization algorithm for MPEG I/II Layer-3 (MP3) encoding based on the method of Lagrangian multipliers. Generally, an iterative method is performed such that a global quantization step size is determined while scale factors are fixed, and thereafter the scale factors are determined while the global quantization step size is fixed. This is repeated until a calculated rate-distortion cost is within a predetermined threshold. The methods are demonstrated to be computationally efficient and the resulting bit stream is fully standard compatible.

IPC 8 full level

G10L 19/02 (2006.01); **G10L 19/035** (2013.01)

CPC (source: EP)

G10L 19/035 (2013.01)

Citation (applicant)

- XU; E.-H. YANG: "Proc. 2005 IEEE Workshop on Multimedia Signal Processing", October 2005, article "Rate-distortion optimization for MP3 audio coding with complete decoder compatibility"
- C. BAUER; M. VINTON: "Proc. of the 2004 IEEE workshop on Multimedia Signal Processing", 2004, article "Joint optimization of scale factors and Huffman codebooks for MEPG-4 AAC", pages: 111 - 114
- C. BAUER; M. VINTON: "Joint optimization of scale factors and Huffman codebooks for MEPG-4 AAC", IEEE TRANS. ON SIGNAL PROCESSING, vol. 54, January 2006 (2006-01-01), pages 177 - 189

Citation (search report)

- [A] EP 1850327 A1 20071031 - ST MICROELECTRONICS ASIA [SG]
- [A] BOSI M ET AL: "ISO/IEC MPEG-2 ADVANCED AUDIO CODING", JOURNAL OF THE AUDIO ENGINEERING SOCIETY, AUDIO ENGINEERING SOCIETY, NEW YORK, NY, US, vol. 45, no. 10, 1 October 1997 (1997-10-01), pages 789 - 812, XP000730161, ISSN: 1549-4950
- [DA] JINGMING XU ET AL: "Rate-distortion Optimization for MP3 Audio Coding with Complete Decoder Compatibility", MULTIMEDIA SIGNAL PROCESSING, 2005 IEEE 7TH WORKSHOP ON, IEEE, PI, 1 October 2005 (2005-10-01), pages 1 - 4, XP031018284, ISBN: 978-0-7803-9288-5

Cited by

JP5635213B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2192577 A1 20100602; **EP 2192577 B1 20111102**; AT E532175 T1 20111115; CA 2686264 A1 20100601; CA 2686264 C 20150127

DOCDB simple family (application)

EP 08170396 A 20081201; AT 08170396 T 20081201; CA 2686264 A 20091124