

Title (en)  
SYSTEMS AND METHODS FOR ADAPTIVE VIDEO CODING

Title (de)  
SYSTEME UND VERFAHREN FÜR ADAPTIVE VIDEOKODIERUNG

Title (fr)  
SYSTÈMES ET PROCÉDÉS DE CODAGE VIDÉO ADAPTATIF

Publication  
**EP 2633685 A1 20130904 (EN)**

Application  
**EP 11779073 A 20111027**

Priority  
• US 40732910 P 20101027  
• US 2011058027 W 20111027

Abstract (en)  
[origin: WO2012058394A1] Systems and methods are described for determining an optimised sampling ratio for coding video data that reduces overall distortion introduced by the coding process. It seeks to balance the information loss introduced during downsampling and the information loss introduced during coding. The sampling ratio is generally determined by reducing, or in some cases minimizing, the overall error introduced through the downsampling process and the coding process, and may be adaptive based on the content of the video data being processed and a target bit rate. Computation power can be saved by coding a downsampled video. The process derives a plurality of downsampling ratios, and selects a downsampling ratio that reduces the total amount of distortion introduced during the down - sampling and coding stages. The down - sampling ratio may be selected given the available data transmission capacity, input video signal statistics, and/or other operational parameters, and may optimally reduce the overall distortion.

IPC 8 full level  
**H04N 19/59** (2014.01); **H04N 19/117** (2014.01); **H04N 19/146** (2014.01); **H04N 19/147** (2014.01); **H04N 19/172** (2014.01); **H04N 19/189** (2014.01); **H04N 19/196** (2014.01); **H04N 19/587** (2014.01); **H04N 19/60** (2014.01); **H04N 19/85** (2014.01)

CPC (source: EP KR)  
**H04N 19/117** (2014.11 - EP KR); **H04N 19/132** (2014.11 - EP KR); **H04N 19/147** (2014.11 - EP KR); **H04N 19/172** (2014.11 - EP KR); **H04N 19/189** (2014.11 - EP KR); **H04N 19/196** (2014.11 - EP KR); **H04N 19/587** (2014.11 - EP KR); **H04N 19/59** (2014.11 - EP KR); **H04N 19/85** (2014.11 - EP KR); **H04N 19/146** (2014.11 - EP KR); **H04N 19/60** (2014.11 - EP KR)

Citation (search report)  
See references of WO 2012058394A1

Citation (examination)  
• ABRAHAM A S ET AL: "Bandwidth-aware video encoding with adaptive image scaling", 2004 IEEE INTERNATIONAL CONFERENCE ON MULTIMEDIA AND EXPO : JUNE 27 - 30, 2004, TAIPEI, TAIWAN, IEEE OPERATIONS CENTER, PISCATAWAY, NJ, vol. 1, 27 June 2004 (2004-06-27), pages 157 - 160, XP010770768, ISBN: 978-0-7803-8603-7, DOI: 10.1109/ICME.2004.1394149  
• KIM A N ET AL: "Improving the Rate-Distortion Performance of DPCM Using Multirate Processing With Application in Low-Rate Image Coding", IEEE TRANSACTIONS ON SIGNAL PROCESSING, IEEE SERVICE CENTER, NEW YORK, NY, US, vol. 55, no. 10, 1 October 2007 (2007-10-01), pages 4958 - 4968, XP011192571, ISSN: 1053-587X, DOI: 10.1109/TSP.2007.897901

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2012058394 A1 20120503**; AU 2011319844 A1 20130613; CN 103283227 A 20130904; EP 2633685 A1 20130904; KR 20130105870 A 20130926

DOCDB simple family (application)  
**US 2011058027 W 20111027**; AU 2011319844 A 20111027; CN 201180062860 A 20111027; EP 11779073 A 20111027; KR 20137013488 A 20111027