Title (en)

ENCRYPTED AND WATERMARKED TEMPOREL AND RESOLUTION LAYERING IN ADVANCED TELEVISION

Title (de)

VERSCHLÜSSELTE UND MIT WASSERZEICHEN VERSEHENE TEMPOREL- UND AUFLÖSUNGSSCHICHTUNG BEIM ERWEITERTEN FERNSEHEN

Title (fr)

STRUCTURATION EN COUCHES TEMPORELLE, PAR RESOLUTION CODEE ET EN FILIGRANE NUMERIQUE DES TELEVISIONS DE POINTE

Publication

EP 1512286 A4 20090513 (EN)

Application

EP 02747897 A 20020613

Priority

US 0218884 W 20020613

Abstract (en)

[origin: WO2004012455A1] A method and apparatus for image compression using temporal and resolution layering of compressed image frames, and which provides encryption and watermarking capabilities. In particular, layered compression allows a form of modularized decomposition of an im age that supports flexible encryption and watermarking (1404) techniques. Using layered compression, the base layer and various internal components of the base layer can be used to encrypt a compressed layered movie data stream. By using such a layered subset of the bits, the entire picture stream can be made unrecognizable by encrypting only a small fraction of the bits of the entire stream. A variety of encryption algorithms and strengths can be applied to various portions of the layered stream, including enhancement layers. Encryption algorithms or keys can be changed at each slice boundary as well, to provide greater intertwining of the encryption and the picture stream. Watermarking (1404) tracks lost or stolen copies byck to the source, so that the nature of theft can be determine d and so that those involved in a theft can be identified. Watermarking (1404) preferably uses low order bits in certain coefficients in certain frames of a layered compression movie stream to provide reliable isentification while being invisible or nearly invisible to the eye. An enhancement layer can also have its own unique identifying watermark (1404) structure.

IPC 1-7

H04N 7/167

IPC 8 full level

H04N 7/26 (2006.01); **H04N 7/167** (2011.01)

CPC (source: EP)

G06T 1/0085 (2013.01); **H04N 7/1675** (2013.01); **H04N 19/467** (2014.11); **H04N 21/2347** (2013.01); **H04N 21/25841** (2013.01); **H04N 21/26613** (2013.01); G06T 2201/0052 (2013.01); G06T 2201/0053 (2013.01)

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