

## Title (en)

A METHOD, AN APPARATUS AND A COMPUTER PROGRAM PRODUCT FOR VIDEO ENCODING AND VIDEO DECODING

## Title (de)

VERFAHREN, VORRICHTUNG UND COMPUTERPROGRAMMPRODUKT ZUR VIDEOCODIERUNG UND VIDEODECODIERUNG

## Title (fr)

PROCÉDÉ, APPAREIL ET PRODUIT-PROGRAMME INFORMATIQUE POUR CODAGE VIDÉO ET DÉCODAGE VIDÉO

## Publication

**EP 4032314 A4 20230719 (EN)**

## Application

**EP 20865714 A 20200826**

## Priority

- FI 20195788 A 20190920
- FI 2020050552 W 20200826

## Abstract (en)

[origin: WO2021053261A1] The embodiments relate to methods and apparatuses for coding volumetric video. A method for encoding comprises receiving (610) a video presentation frame, where the video presentation represents a three-dimensional data; generating (620) one or more patches (410) from the video presentation frame, wherein the patches represent different parts of the content of the video presentation frame; determining (420, 630) which patch(es) of the generated one or more patches are to be encrypted (440), wherein the determination is based on a content of the patch; encrypting (440, 640) the determined patches with an encryption method that corresponds to a pre-defined authorization level; and encoding (450, 650) into a bitstream of a corresponding patch, information on the used encryption method.

## IPC 8 full level

**H04N 21/2347** (2011.01); **G06F 21/10** (2013.01); **G06F 21/62** (2013.01); **H04L 9/14** (2006.01); **H04L 9/32** (2006.01); **H04N 5/913** (2006.01); **H04N 13/161** (2018.01); **H04N 19/167** (2014.01); **H04N 19/46** (2014.01); **H04N 19/597** (2014.01); **H04N 19/70** (2014.01); **H04N 21/2389** (2011.01); **H04N 21/258** (2011.01); **H04N 21/4385** (2011.01); **H04N 21/4405** (2011.01)

## CPC (source: EP US)

**G06F 21/10** (2013.01 - EP US); **G06F 21/602** (2013.01 - EP); **H04L 9/065** (2013.01 - EP); **H04L 9/088** (2013.01 - EP); **H04N 5/913** (2013.01 - EP); **H04N 19/167** (2014.11 - EP); **H04N 19/46** (2014.11 - EP); **H04N 19/597** (2014.11 - EP); **H04N 21/23897** (2013.01 - EP); **H04N 21/44055** (2013.01 - EP); **H04N 13/161** (2018.05 - EP); **H04N 2005/91364** (2013.01 - EP)

## Citation (search report)

- [IY] US 2018189461 A1 20180705 - GHAFOURIFAR ALSTON [US], et al
- [Y] ALEXIS MICHAEL TOURAPIS (MAILTO:); ET AL: "[V-PCC][New proposal] Volumetric Tiling Information SEI message for V-PCC", no. m49414, 3 July 2019 (2019-07-03), XP030207719, Retrieved from the Internet <URL:http://phenix.int-evry.fr/mpeg/doc\_end\_user/documents/127\_Gothenburg/wg11/m49414-v1-m49414\_SEI\_TILES\_v3.docx.zip m49414\_SEI\_TILES\_v3.docx> [retrieved on 20190703]
- [Y] SEBASTIAN SCHWARZ ET AL: "[VPCC] Meeting notes from joint 3DG/Systems meeting on system technologies of V-PCC", no. m48265, 1 July 2019 (2019-07-01), XP030222004, Retrieved from the Internet <URL:http://phenix.int-evry.fr/mpeg/doc\_end\_user/documents/127\_Gothenburg/wg11/m48265-v1-M48265\_AHG\_notes.zip VPCC HLS.pdf> [retrieved on 20190701]
- See also references of WO 2021053261A1

## Designated contracting state (EPC)

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