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(54) Title: AN APPARATUS, A METHOD AND A COMPUTER PROGRAM FOR VIDEO CODING AND DECODING

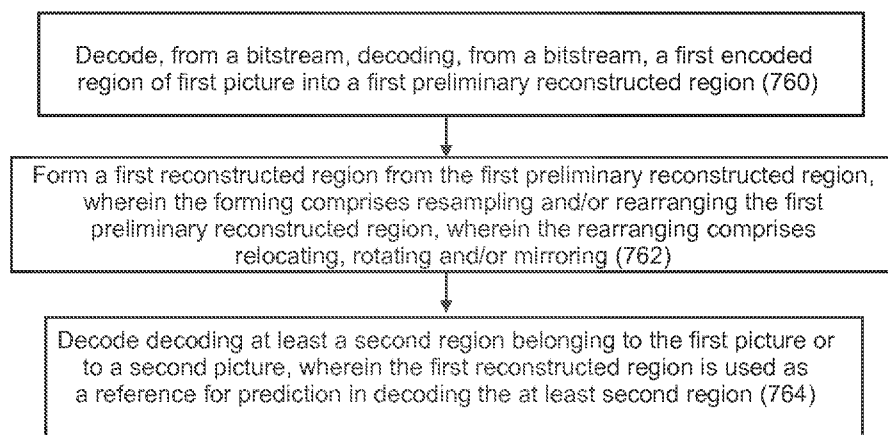


Fig. 7b

(57) Abstract: A method for video decoding comprising: decoding, from a bitstream, a first encoded region of a first equirectangular picture into a first preliminary reconstructed region (760); forming a first reconstructed region from the first preliminary reconstructed region, wherein the forming comprises downsampling and rearranging the first preliminary reconstructed region, wherein the rearranging comprises relocating and one or both of rotating and mirroring (762); and decoding at least a second region, wherein the first reconstructed region is used as a reference for prediction in decoding the at least second region (764) and the second region either belongs to a second picture and is spatially collocated with the first reconstructed region or belongs to the first picture.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
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| <b>A. CLASSIFICATION OF SUBJECT MATTER</b>   |  |                       |
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| See extra sheet  |  |                       |
| According to International Patent Classification (IPC) or to both national classification and IPC  |  |                       |
| <b>B. FIELDS SEARCHED</b>  |  |                       |
| Minimum documentation searched (classification system followed by classification symbols)  |  |                       |
| IPC: H04N, G06T, G03B  |  |                       |
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| FI, SE, NO, DK   |  |                       |
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| EPODOC, EPO-Internal full-text databases, WPIAP, XP3GPP, XPAIP, XPESP, XPETSI, XPI3E, XPIEE, XPIETF, XPIOP, XPIPCOM, XPJPEG, XPMISC, XPOAC, XPRD, XPTK, COMPDX, INSPEC, TDB, NPL, Internet |  |                       |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>  |  |                       |
| Category*  | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
| A  | YU, M. et al. Content Adaptive Representations of Omnidirectional Videos for Cinematic Virtual Reality. Proceedings of the 3rd International Workshop on Immersive Media Experiences(ImmersiveME'15) [online], 2015-10-30, 1-6, [retrieved on 2017-10-20]. Retrieved from < <a href="https://dl.acm.org/citation.cfm?id=2814348">https://dl.acm.org/citation.cfm?id=2814348</a> > <DOI:10.1145/2814347.2814348> abstract; sections 3.1, 4 and 4.2; Figures 1 and 5 | 1-30                  |
| A  | JP 2002312778 A (BE HERE CORP) 25 October 2002 (25.10.2002) paragraphs [0115], [0171]; Figures 5B and 5C   | 1-30                  |
| A  | WO 2016076680 A1 (SAMSUNG ELECTRONICS CO LTD [KR]) 19 May 2016 (19.05.2016) paragraphs [128], [131]-[132]; Figures 15 and 17   | 1-30                  |
| A  | WO 2016064862 A1 (GOOGLE INC [US]) 28 April 2016 (28.04.2016) abstract; paragraphs [229]-[232]; Figures 21A-21D  | 1-30                  |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.                                |  |                       |
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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| T         | WO 2017127816 A1 (WEN ZIYU [CN]) 27 July 2017 (27.07.2017) paragraphs [53], [55]-[56] and [66]-[68]; Figures 2B, 3 and 8 | 1-30                  |

**INTERNATIONAL SEARCH REPORT**  
**Information on Patent Family Members**

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| Patent document cited in search report | Publication date | Patent family members(s)   | Publication date   |
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| JP 2002312778 A                        | 25/10/2002       | None   |  |
| .....                                  |                  |  |  |
| WO 2016076680 A1                       | 19/05/2016       | CN 107113414 A<br>EP 3219102 A1<br>KR 20170084275 A<br>US 2016142697 A1  | 29/08/2017<br>20/09/2017<br>19/07/2017<br>19/05/2016   |
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| .....                                  |                  |  |  |
| WO 2017127816 A1                       | 27/07/2017       | None   |  |
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**G06T 3/40** (2006.01)  
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