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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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- (54) **Title:** APPARATUSES AND METHODS FOR HDR IMAGE ENCODING AND DECODING

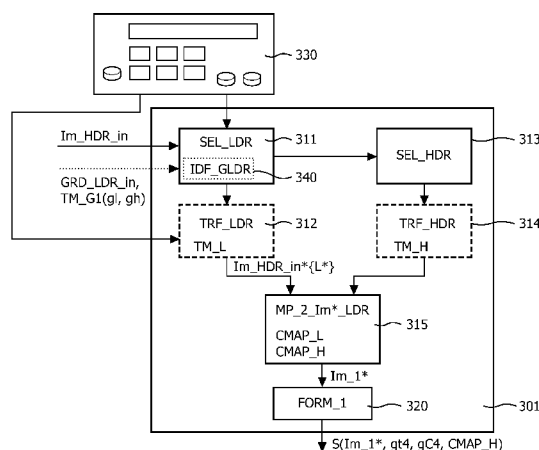


FIG. 3

- (57) **Abstract:** To make available a HDR image encoding mechanism with strongly improved usability, we describe an image encoding unit (301) arranged to encode a high dynamic range image (IM_HDR-in) comprising: -an LDR selector (311) for identifying a low dynamic range of luminances (R_Norml_LDR) or corresponding range of luma code values (R_LDR) within the total range of luminances (Range_HDR) covered by the high dynamic range image; -a HDR selector for selecting at least one complementary range (R_above) within the total range of luminances (Range_HDR), comprising mostly luminances not covered by the low dynamic range of luminances (R_Norml_LDR); -a code mapping unit (315) arranged to encode in a first image (Im_1*), having a luma component comprising N bit code words, pixel luminances of the high dynamic range image (IM_HDR-in) falling within the low dynamic range of luminances (R_Norml_LDR) to code values (Y_out) according to a first mapping (CMAP_L), and pixel luminances of the high dynamic range image (IM_HDR-in) falling within the at least one complementary range (R_above) to code values (Y_out) according to a second mapping (CMAP_H), wherein the first and second mappings map to disjunct subranges of the range of luma code values of the first image (RcTot_Im1). Fig. 3



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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	QIU G ET AL: "Hierarchical tone mapping for high dynamic range image visualization", VISUAL COMMUNICATIONS AND IMAGE PROCESSING; 12-7-2005 - 15-7-2005; BEIJING,, 12 July 2005 (2005-07-12), XP030081051, the whole document ----- -/--	1-18



Further documents are listed in the continuation of Box C.



See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LARSON G W ET AL: "A VISIBILITY MATCHING TONE REPRODUCTION OPERATOR FOR HIGH DYNAMIC RANGE SCENES", IEEE TRANSACTIONS ON VISUALIZATION AND COMPUTER GRAPHICS, IEEE SERVICE CENTER, LOS ALAMITOS, CA, US, vol. 3, no. 4, 1 October 1997 (1997-10-01), pages 291-306, XP000730965, ISSN: 1077-2626, DOI: 10.1109/2945.646233 sections 3 and 4	1-18
A	----- WO 2010/132237 A1 (DOLBY LAB LICENSING CORP [US]; KUNKEL TIMO [GB]; REINHARD ERIK [GB]; D) 18 November 2010 (2010-11-18) page 14, paragraph 41; figure 10 page 28, paragraph 70; figure 12	1-18
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A	----- FRANCESCO BANTERLE ET AL: "High Dynamic Range Imaging and Low Dynamic Range Expansion for Generating HDR Content", COMPUTER GRAPHICS FORUM, vol. 28, no. 8, 1 December 2009 (2009-12-01), pages 2343-2367, XP055031838, ISSN: 0167-7055, DOI: 10.1111/j.1467-8659.2009.01541.x sections 3.3 and 3.5	1-18

INTERNATIONAL SEARCH REPORT

Information on patent family members

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		KR 20120013977 A	15-02-2012
		US 2012051635 A1	01-03-2012
		WO 2010132237 A1	18-11-2010
