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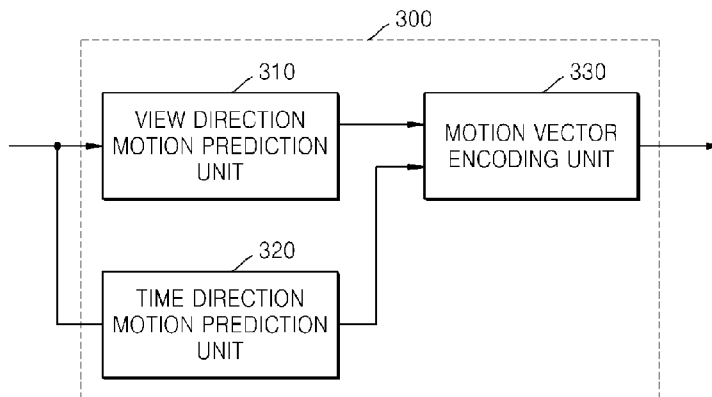
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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(54) **Title:** METHOD AND APPARATUS FOR ENCODING AND DECODING MOTION VECTOR OF MULTI-VIEW VIDEO

[Fig. 3]



(57) **Abstract:** Provided are methods and apparatuses for encoding and decoding a motion vector in a multi-view view image sequence. A method of encoding includes: determining a view direction motion vector of a current block by performing motion prediction with reference to a first frame having a second view different from a first view of the current block; determining view direction motion vector predictor candidates using a view direction motion vector of an adjacent block that refers to a reference frame having a different view from the first view, and a view direction motion vector of a corresponding region included in a second reference frame having the first view and a different picture order count than the current frame.

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**A. CLASSIFICATION OF SUBJECT MATTER****H04N 7/32(2006.01)i, H04N 13/00(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

H04N 7/32; H04N 13/00; H04N 11/02

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords:"multi-view,motion vector predictor,candidate"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2009-0168874 A1 (SU YEPING et al.) 02 July 2009 See abstract, Fig.1 and page 1,[0009]-page 2,[0021].	1-15
A	KR 10-2007-0117432 A (경희대학교 산학협력단) 12 December 2007 See abstract, Fig.7 and page 16,[0097]-page 17,[0105].	1-15
A	US 2009-0016436 A1 (PARK JI HO et al.) 15 January 2009 See abstract and claim 1.	1-15

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009-0168874 A1	02.07.2009	AU 2007-205179 A1 AU 2007-205179 B2 BR P10706434A2 BR P10706438A2 CN 101371584 B CN 101931806 A EP 2309750 A2 EP 2424244 A1 JP 2009-522985 A JP 2009-522986 A KR 10-2008-0092357 A KR 10-2008-0092359 A KR 10-2008-0093983 A RU 2008132834 A RU 2008132879 A US 2009-010323 A1 US 2009-0141814 A1 WO 2007-081926 A2 WO 2007-081926 A3	19.07.2007 25.08.2011 29.03.2011 29.03.2011 14.12.2011 29.12.2010 13.04.2011 29.02.2012 11.06.2009 11.06.2009 15.10.2008 15.10.2008 22.10.2008 20.02.2010 20.02.2010 08.01.2009 04.06.2009 19.07.2007 19.07.2007
KR 10-2007-0117432 A	12.12.2007	None	
US 2009-0016436 A1	15.01.2009	None	