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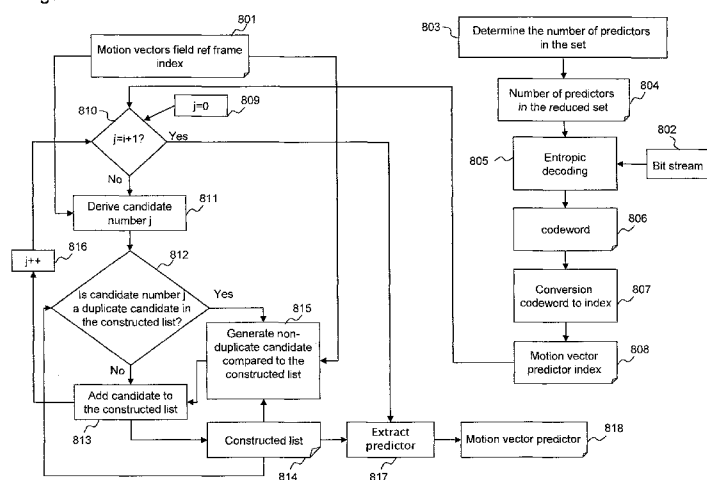
- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

31 January 2013

(54) Title: METHOD AND DEVICE FOR ENCODING A SEQUENCE OF IMAGES AND METHOD AND DEVICE FOR DECODING A SEQUENCE OF IMAGE

Figure 7



(57) Abstract: A method and device for deriving motion information of an image portion of an image predicted by motion prediction with respect to at least one reference image, the method comprising for said image portion: obtaining a number i of motion information predictors 808 of a second set of motion information predictors 814 taken from a first set of motion information predictors for decoding the image portion; generating said second set of motion information predictors 814 consisting of said number i of motion information predictors, wherein there are no duplicates among the i motion information predictors of said second set. A method and device for decoding a bitstream, and a method and device for encoding a sequence of image including a method for deriving motion information of an image portion of an image predicted by motion prediction with respect to at least one reference image as described above.

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2012/060601

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04N7/26 H04N7/36 H04N7/64
ADD.

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

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)

EP0-Internal, COMPENDEX, INSPEC, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP 2 266 318 A2 (NOKIA CORP [FI]) 29 December 2010 (2010-12-29) figures 6, 8 page 9, line 1 - page 9, line 27 page 11, line 3 - page 11, line 19 ----- -/--	27,28,31 1-5, 14-18,32

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

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is considered with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

5 July 2012

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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2012/060601

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GUILLAUME LAROCHE ET AL: "Robust solution for the AMVP parsing issue", 96. MPEG MEETING; 21-3-2011 - 25-3-2011; GENEVA; (MOTION PICTURE EXPERT GROUP OR ISO/IEC JTC1/SC29/WG11),, no. m19740, 18 March 2011 (2011-03-18), XP030048307, section 1.1 "Parsing issue in AMVP predictor" section 1.3 "Our proposal" section 3.1 "Configuration 1: tool 1 only" section 3.2 "Configuration 2: tool 1 and tool 2 for AMVP only" -----	1-5, 14-18, 27,28, 31,32
A	JOEL JUNG ET AL: "Competition-Based Scheme for Motion Vector Selection and Coding", 29. VCEG MEETING; 77. MPEG MEETING; 17-07-2006 - 17-07-2006; KLAGENFURT, AT; (VIDEO CODING EXPERTS GROUP OF ITU-T SG.16),, no. VCEG-AC06r1, 2 August 2006 (2006-08-02), XP030003490, ISSN: 0000-0446 the whole document -----	1-5, 14-18, 27,28, 31,32
A	US 2011/013697 A1 (CHOI WOONG-IL [KR] ET AL) 20 January 2011 (2011-01-20) paragraph [0035] - paragraph [0050] -----	1-5, 14-18, 27,28, 31,32
X,P	LAROCHE G ET AL: "CE9: Description of experiments ROB01 and ROB02", 6. JCT-VC MEETING; 97. MPEG MEETING; 14-7-2011 - 22-7-2011; TORINO; (JOINT COLLABORATIVE TEAM ON VIDEO CODING OF ISO/IEC JTC1/SC29/WG11 AND ITU-T SG.16); URL: HTTP://WFTP3.ITU.INT/AV-ARCH/JCTVC-SITE/, no. JCTVC-F474, 15 July 2011 (2011-07-15), XP030009497, section 2.5 "Fast derivation process at decoder side for Tool 2" section 2.1 "Tool 1: Determination of the number of candidates based on spatial candidates" section 2.2 "Tool 2: Generation of non-redundant predictors set" ----- -/--	1-5, 14-18, 27,28, 31,32

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2012/060601

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	CHEN J ET AL: "MVP index parsing with fixed number of candidates", 6. JCT-VC MEETING; 97. MPEG MEETING; 14-7-2011 - 22-7-2011; TORINO; (JOINT COLLABORATIVE TEAM ON VIDEO CODING OF ISO/IEC JTC1/SC29/WG11 AND ITU-T SG.16); URL: HTTP://WFTP3.ITU.INT/AV-ARCH/JCTVC-SITE/,, no. JCTVC-F402, 12 July 2011 (2011-07-12), XP030009425, figure 1 section 2. "Description" -----	1-5, 14-18, 27,28, 31,32
A,P	J-L LIN ET AL: "CE9: Results of Experiment ROB04", 6. JCT-VC MEETING; 97. MPEG MEETING; 14-7-2011 - 22-7-2011; TORINO; (JOINT COLLABORATIVE TEAM ON VIDEO CODING OF ISO/IEC JTC1/SC29/WG11 AND ITU-T SG.16); URL: HTTP://WFTP3.ITU.INT/AV-ARCH/JCTVC-SITE/,, no. JCTVC-F052, 15 July 2011 (2011-07-15), XP030009075, abstract section 2. "Experiment description" -----	1-5, 14-18, 27,28, 31,32

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2012/060601

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 29, 30
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-5, 14-18, 27, 28, 31, 32

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5, 14-18, 27, 28, 31, 32

Reducing the computational complexity without losing coding efficiency when performing motion vector competition between a set of candidate motion information predictors

2. claims: 6-13, 19-26, 33

Optimizing the trade-off between the coding efficiency and the computational complexity when performing motion vector competition between a set of candidate motion information predictors

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 29, 30

Claim 29 as well as claim 30 rely, in respect of the definition of their subject-matter, solely on references to the description and drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here. Also, neither of the methods claimed by independent claims 29 and 30 specify method steps. For these reasons, it is neither possible to give a definite construction to claims 29 and 30 (cf. PCT Guidelines 5.10, 16.27) nor is it possible to ascertain the scope of protection sought by said claims, which is not in compliance with the clarity requirements of Article 6 PCT. The non-compliance with the substantive provisions is to such an extent that a meaningful search of the whole claimed subject-matter of independent claims 29 and 30 could not be carried out (Article 17(2) PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2012/060601

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 2266318	A2	29-12-2010	EP 2266318 A2	29-12-2010
			US 2009304084 A1	10-12-2009
			WO 2009115901 A2	24-09-2009

US 2011013697	A1	20-01-2011	CN 102474619 A	23-05-2012
			EP 2441266 A2	18-04-2012
			KR 20110008653 A	27-01-2011
			US 2011013697 A1	20-01-2011
			WO 2011010858 A2	27-01-2011
