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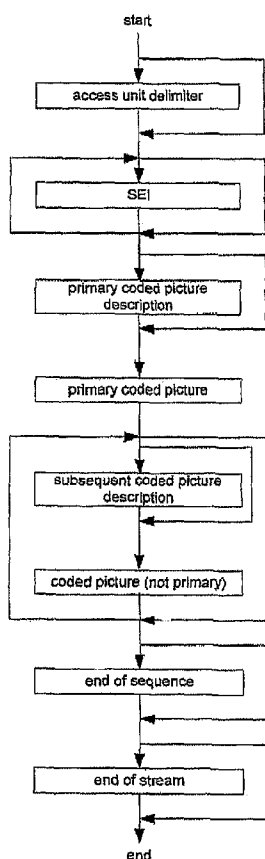
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[Continued on next page]

(54) Title: PICTURE DELIMITER IN SCALABLE VIDEO CODING



(57) Abstract: The use of a picture delimiter that is contained in a NAL unit type value that is reserved in the current AVC or SVC specification. The present invention provides the scalability information for the H.264/AVC base layer in such a manner that bitstreams remain decodable with H.264/AVC decoders. In addition, the picture delimiter of the present invention may contain many other syntax elements that can help in easier processing of bitstreams compared to the plain H.264/AVC bitstream syntax.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2007/000757

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

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)

IPC: H04N

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

SE,DK,FI,NO classes as above

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

EPO-INTERNAL, WPI DATA, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WIEGAND, T ET AL: "Overview of the H.264/AVC Video Coding Standard", IEEE Transactionss on Circuits and Systems for Video Technology, Vol. 13, NO. 7, July 2003, pages 560-576, ISSN 1051-8215, Inspec AN 7715560. "Section III.F. Access Units", page 564, figure 4. --	1-28
A	WO 2005079070 A1 (NOKIA CORPORATION), 25 August 2005 (25.08.2005), whole document --	1-28
A	WO 2004075554 A1 (NOKIA CORPORATION), 2 Sept 2004 (02.09.2004), whole document --	1-28

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

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- "&" document member of the same patent family

Date of the actual completion of the international search

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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.
P,A	WO 2006061838 A2 (IMAGINE COMMUNICATIONS LTD.), 15 June 2006 (15.06.2006), paragraph 111 --	1-28
E	WO 2007080502 A2 (NOKIA CORPORATION), 19 July 2007 (19.07.2007), paragraphs 11-13 -- -----	

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Paper copies can be ordered at a cost of 50 SEK per copy from PRV InterPat (telephone number 08-782 28 85).

Cited literature, if any, will be enclosed in paper form.

INTERNATIONAL SEARCH REPORT

Information on patent family members

01/09/2007

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PCT/IB2007/000757

WO	2005079070	A1	25/08/2005	AU	2005212896	A	25/08/2005
				BR	PI0507925	A	17/07/2007
				CA	2556120	A	25/08/2005
				CN	1934865	A	21/03/2007
				EP	1714490	A	25/10/2006
				JP	2007522749	T	09/08/2007
				KR	20060116245	A	14/11/2006
				US	20050201471	A	15/09/2005
				US	20060222158	A	05/10/2006

WO	2004075554	A1	02/09/2004	CN	1751517	A	22/03/2006
				EP	1595404	A	16/11/2005
				JP	2006518127	T	03/08/2006
				MX	PA05008405	A	05/10/2005
				US	20040228413	A	18/11/2004
				ZA	200506149	A	31/05/2006

WO	2006061838	A2	15/06/2006	US	20060195881	A	31/08/2006

WO	2007080502	A2	19/07/2007	US	20070201549	A	30/08/2007
