(19)

(12)





(11) **EP 2 151 996 A3**

EUROPEAN PATENT APPLICATION

(88)	Date of publication A3: 21.07.2010 Bulletin 2010/29	(51)	Int Cl.: <i>H04N 7/01</i> ^(2006.01)	H04N 5/44 ^(2006.01)
(43)	Date of publication A2: 10.02.2010 Bulletin 2010/06			
(21)	Application number: 09167372.3			
(22)	Date of filing: 06.08.2009			
(84)	Designated Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR Designated Extension States: AL BA RS	(72)	Inventors: Hoshino, Takaya Tokyo (JP) Miyazaki, Shinichiro Tokyo (JP) Imai, Seiko Tokyo (JP)	
(30)	Priority: 07.08.2008 JP 2008203859	(74)	Depresentatives Théve	at lean Ruuna at al
(71)	Applicant: Sony Corporation Tokyo (JP)	(74)	Cabinet Beau de Lond 158, rue de l'Universit 75340 Paris Cédex 07	énie é (FR)

(54) Image signal processing unit and method of processing image signal

(57) An image signal processing unit includes a frame rate conversion circuit (53) performing double frame rate conversion on an input image signal from a first frame frequency to a second frame frequency. When performing frame rate conversion with the motion correction process, a motion vector is determined between a first frame image and a third frame image, and three interpolation frame images are formed through the motion

correction process to the first frame image based on the motion vector, and are inserted between the first and third frame images so as to establish the second frame frequency. When performing frame rate conversion without the motion correction process, an interpolation frame image same as the first frame image is inserted between the first and second frame images, and an interpolation frame image same as the second frame image is inserted between the second and third frame images.





EUROPEAN SEARCH REPORT

Application Number EP 09 16 7372

l	DOCUMENTS CONSID	ERED TO BE	RELEVANT		
Category	Citation of document with ir of relevant passa	idication, where ap ages	opropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X,D	EP 1 303 136 A2 (S0 16 April 2003 (2003 * paragraphs [0032] [0098]; figures 4,5	NY CORP [JI -04-16) - [0057], ,17 *	?]) [0099] -	1-5	INV. H04N7/01 H04N5/44
A	DE HAAN G ET AL: " MOTION-COMPENSATED NATURAL-MOTION MOVI 19960501, vol. 42, no. 2, 1 M pages 165-174, XP01 * pages 165-168 *	IC FOR 100 Hz TV W E-MODE" ay 1996 (19 1008226	VITH 996-05-01),	1	
Х	EP 1 513 344 A1 (SO 9 March 2005 (2005- * paragraphs [0019] [0025]; figures 10,	NY CORP [J 03-09) , [0020], 12 * 	?]) [0024],	1-5	
					HO4N
	The present eccret report her				
	Place of search	Date of c	completion of the search		Examiner
	Munich	10 .	June 2010	Ro1	et, Etienne
C/ X : parti docu A : tech O : non P : inter	CATEGORY OF CITED DOCUMENTS : particularly relevant if taken alone : particularly relevant if combined with another document of the same category : technological background : non-written disclosure : intermediate document		 T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document oited in the application L : document oited for other reasons * : member of the same patent family, corresponding document 		

EP 2 151 996 A3

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 09 16 7372

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

10-06-2010

Patent do cited in sea	cument rch report	Publication date	Patent family member(s)			Publication date		
EP 1303	136 A2	16-04-2003	CN DE JP JP KR US	1424856 60208292 3855761 2003189257 20030030911 2003107672	A T2 B2 A A A A1	18-06-2003 07-09-2006 13-12-2006 04-07-2003 18-04-2003 12-06-2003		
EP 1513	344 A1	09-03-2005	CN WO KR TW US	1698373 2004102963 20060008271 246332 2005264692	A A1 A B A1	16-11-2005 25-11-2004 26-01-2006 21-12-2005 01-12-2005		
ORM PO459								
ີ ວິ ພິ For more details abou	- For more details about this annex : see Official Journal of the European Patent Office, No. 12/82							