



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>7</sup> :</b> <b>H04N 5/222</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 00/69168</b> <b>(43) International Publication Date:</b> 16 November 2000 (16.11.00)
<b>(21) International Application Number:</b> PCT/EP00/03804 <b>(22) International Filing Date:</b> 27 April 2000 (27.04.00)  <b>(30) Priority Data:</b> 99201423.3      7 May 1999 (07.05.99)      EP  <b>(71) Applicant:</b> KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).  <b>(72) Inventor:</b> VAN ROOY, Johannes, H., J., M.; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).  <b>(74) Agent:</b> SCHOENMAKER, Maarten; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).		<b>(81) Designated States:</b> CN, JP, KR, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> <i>With international search report.          Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
<b>(54) Title:</b> GATHERING AND EDITING INFORMATION WITH A CAMERA  <div style="text-align: center;"> </div>		
<b>(57) Abstract</b> <p>To make recordings made with a (professional) camera more flexible a method and a camera system is proposed whereby the camera at first sends via communication means recorded information with a low resolution to a studio room. The operator in the studio room selects and/or edits what part of the recorded information he wants and requests to send that part of the information with a high resolution to the studio room.</p>		

***FOR THE PURPOSES OF INFORMATION ONLY***

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav	TM	Turkmenistan
BF	Burkina Faso	GR	Greece		Republic of Macedonia	TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's	NZ	New Zealand		
CM	Cameroon		Republic of Korea	PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

## GATHERING AND EDITING INFORMATION WITH A CAMERA

The invention relates to a method for gathering information with a camera. The invention further relates to a camera system.

5 A method for gathering information with a camera and a camera system are known in the art and are used to gather information for example news, sport events, etc.

Nowadays a cameraman makes recordings with his camera of the news, the sport event, etc. and when he has finished the recordings he "brings" the recorded information on a tape, a disc or whatever to a studio room. In the studio room an operator selects parts of the recorded  
10 information to be used in a news bulletin, a sport bulletin, etc.

Further the use of a satellite during gathering information with a (professional) camera is known whereby beforehand a satellite communication link has to be requested and installed before the cameraman can make the recordings. Via the satellite the information is sent to the studio room where the operator can select the information to be used.  
15

The known methods and known camera systems have disadvantages because in case the cameraman makes the recordings and brings the recorded information to the studio room the operator does not know what has been recorded till he receives this information. Further when a satellite link is used the disadvantage is that the cost are high and there is no  
20 possibility of recording spontaneously events because the satellite link has to be requested beforehand. A further disadvantage of using the satellite link is that no influence on the received information.

An object of the invention is to overcome the disadvantages of the prior art and  
25 to obtain a method and a camera system which are more flexible. To this end a first aspect of the invention provides a method for gathering information as defined in Claim 1.

By using communication means (for example satellite, internet etc.) between the camera and the studio room and by sending the information with a low resolution together with a time code to the studio room it is possible for the operator in the studio room to select with the time

code the part (s) of the recorded information (in the camera) to be sent to the studio room at a higher resolution. That is, that part of the recorded information to be broadcasted. In this way the operator in the studio room is able to select that part of the information he wants to use for a news bulletin, sport bulletin, etc.

5                   For example a telephone connection link can be used as communication means.

A second aspect of the invention provides a camera system as defined in Claim 3.

10                   The camera system comprises a camera with storing means. Further in this camera system the recorded information is at first send with a low resolution to the studio room. By storing the information, later on the operator can select, and or edit parts of the recorded information to be sent to the studio room at higher resolution.

Preferably the storing means are random access storing means to obtain a quick access to the stored information.

15                   Embodiments of the invention are described in the dependent Claims.

The invention and additional features, which may optimally be used to implement invention to advantage, will be apparent from and elucidated with reference to the examples described below hereinafter and shown in the Figure. Herein shows:

20                   The figure schematically an example of a camera system according to the invention.

The figure shows schematically an example of a camera system CS according to the invention. The camera system comprises a camera CAM, communication means CM and a studio room SR.

25                   The camera CAM comprises a camera module CMOD for recording the information. Further the camera comprises storing means CSM for storing the recorded information, for example on random access storing means. The camera further comprises an antenna CAN for sending information il, ih and a time code tc via the communication means  
30                   CM to the studio room SR.

The information to be sent can for example first be encoded using the MPEG coding.

For example the antenna CAN can be an antenna of a wireless telephone connection.

With the antenna CAN the information  $il$ ,  $ih$  is sent to an antenna PAN of the communication means, which comprises in this example a public wireless telephone network PCN. The public wireless telephone network is coupled to the studio room SR for receiving the information  $il$ ,  $ih$ .

At first the camera sends the information at low resolution  $il$ , together with the time code  $tc$  to the studio room.

This information at low resolution can for example be at teleconferencing quality. An operator can select what part of the received information he/she wants to use, and/or to edit. The operator sends back via the communication means a signal  $s$  (select) and/or a signal  $e$  (edit), in these select and/or edit signals the received time code is used to indicate the part of the recorded information. This/these signal(s) are received by the antenna CAN of the camera CAM. After receiving these signals the camera will send the selected and/or edited information at high-resolution  $ih$  via the communication means CM to the studio room SR. In this way it is possible to send only that information (at high resolution) to the studio room that is really used in the studio room, which makes it possible to use this method/camera system even if the bitrate of the communication means is not very high.

Using the above described method / camera system it is possible really to determine what information is broadcasted. For example it is possible to send back to the camera and the camera man instructions to repeat some shoots, or even to interview persons for the camera with the questions coming from someone in the studio room.

The studio room can also be a room in a truck for example, with a wireless telephone connection with the camera.

The quality of the real-time information with low resolution mainly depends on the bitrate of the communication means.

The invention has been described on the basis of an example. The man skilled in the art will be well aware of a lot of variations falling within the scope of the invention.

The speed of sending the selected information with a high-resolution ih depends on the highest possible bitrate of the communication means.

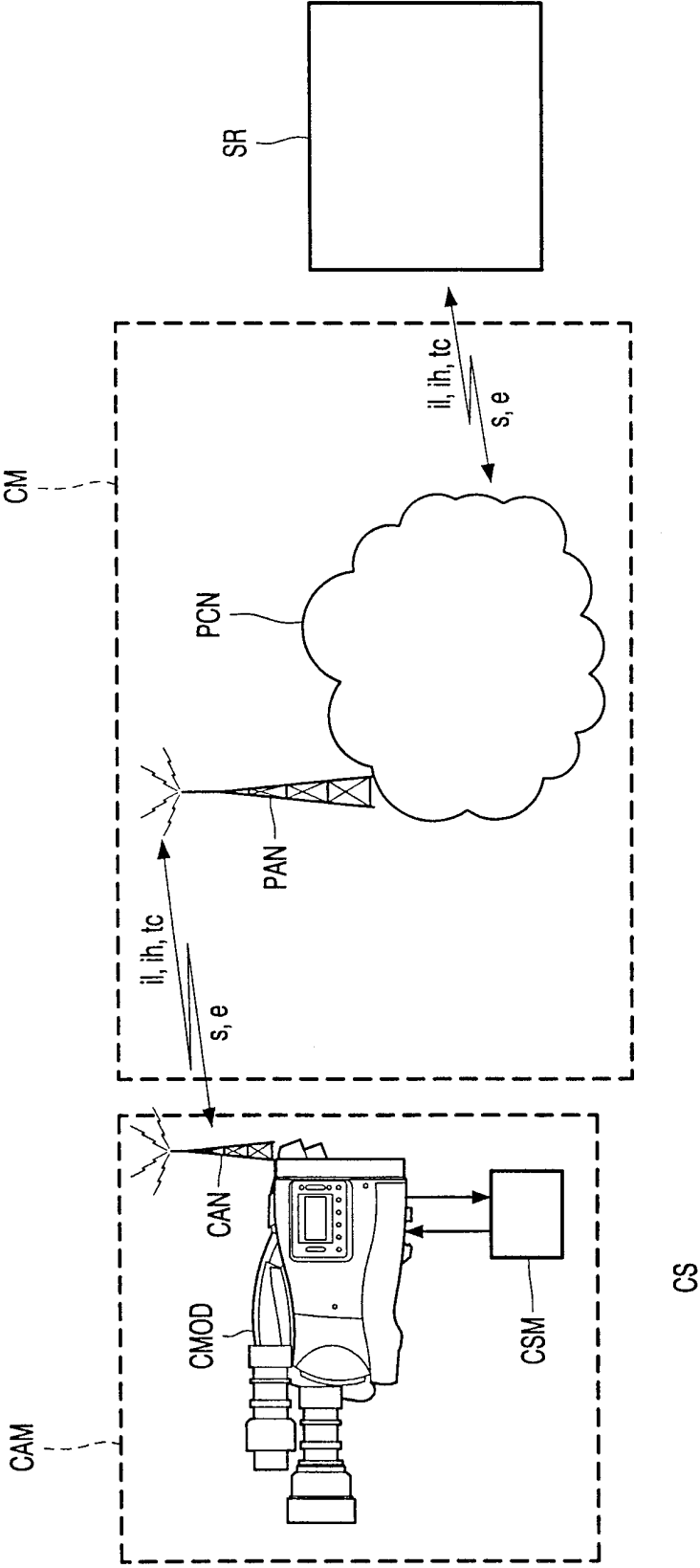
It is to be noticed that the communication means can for example be satellite or internet or any other appropriate communication means.

5 Further instead of sending the information with a time code it is also possible to send the information with so called "meta data" to make for example an edit decision list.

## CLAIMS:

1. Method for gathering information comprising the steps of recording information with a camera and storing the information on storing means, sending information with a low resolution together with a time code via communication means to a studio room, selecting in the studio room at least one part of the received information to be handled further,  
5 sending back a signal to the camera which part(s) of the recorded information has to be sent to the studio room at high, and sending the part of the recorded information from the camera to the studio room.
2. Method according to Claim 1, characterized in that also an edit signal is sent to  
10 the camera for editing the information in the camera.
3. Camera system comprising a camera for recording information and storing the information on storing means, a studio room for receiving the information with a low resolution together with a time code, which studio room is coupled via communication means  
15 to the camera, the studio room comprises selecting means for selecting at least one part of the information received to be handled further, means for sending back a signal via the communication means which part(s) of the stored information has to be sent to the studio room at higher, and the camera comprises sending means for sending the selected part of the stored information to the studio room.  
20
4. A camera system according to Claim 3, characterized in that the storing means are random access storing means.
5. Camera for use in a camera system according to claim 3.

1/1





# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/03804

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04N5/222

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 7 H04N G11B

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 practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 09818 A (STARCAM SYSTEMS INC) 13 March 1997 (1997-03-13) page 16, line 34 -page 18, line 16 page 19, line 13 -page 20, line 34 ---	1,3,5
A	US 5 568 205 A (HURWITZ JAMES) 22 October 1996 (1996-10-22) column 3, line 19 -column 5, line 27 column 5, line 50 -column 9, line 28 ---	1,3,5
A	EP 0 702 832 B (LIGHTWORKS EDITING SYSTEMS LTD) 4 March 1998 (1998-03-04) claim 1 ---	1
A	GB 2 226 218 A (BRITISH BROADCASTING CORP) 20 June 1990 (1990-06-20) ---	
	-/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in 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 document 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 combined 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

22 September 2000

Date of mailing of the international search report

28/09/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Wentzel, J

# INTERNATIONAL SEARCH REPORT

In. ational Application No

PCT/EP 00/03804

## 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>FASCIANO P: "CAMCUTTER - PICTURES DIRECT FROM LENS TO DISK"</p> <p>IMAGE TECHNOLOGY (JOURNAL OF THE BKSTS),GB,BRITISH KINEMATOGRAPH SOUND AND TELEVISION SOCIETY. LONDON, vol. 78, no. 9, 1 October 1996 (1996-10-01), pages 16-18,20, XP000628350</p> <p>ISSN: 0950-2114</p> <p>-----</p>	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/03804

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9709818 A	13-03-1997	AU 6899896 A	27-03-1997
US 5568205 A	22-10-1996	NONE	
EP 0702832 B	27-03-1996	DE 69408838 D	09-04-1998
		DE 69408838 T	17-09-1998
		EP 0702832 A	27-03-1996
		GB 2295482 A,B	29-05-1996
		WO 9429868 A	22-12-1994
		GB 2311681 A,B	01-10-1997
GB 2226218 A	20-06-1990	NONE	