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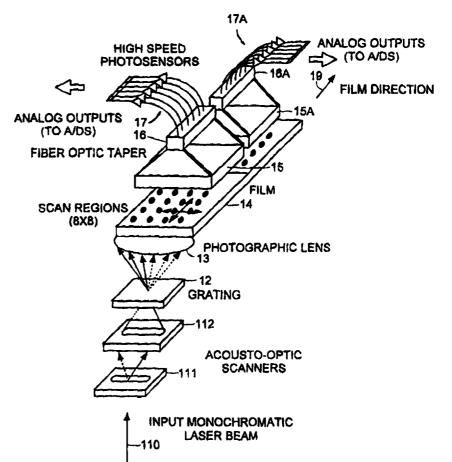
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26 March 1998 (26.03.98)

(54) Title: RAPID HIGH RESOLUTION IMAGE CAPTURE SYSTEM

(57) Abstract

An electronic imaging system for rapid high-resolution scanning of images such as those recorded on movie films. A multiple beam generating arrangement provides an array of light beams incident on one side of the image, while a corresponding array of light-sensing elements is disposed on the opposing side of the image. An output processor provides a value of light intensity as a function of beam position for the entire region of the image scanned by the beam array.



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A. CLASSIFICATION OF SUBJECT MATTER IPC 6 H04N3/40 H04N1/028 H04N1/193 H04N3/15 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 6 HO4N 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) C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages 1 GB 2 270 230 A (SHIMADZU CORP) 2 March X see page 2, line 18 - line 23 see page 2, line 27 - line 31 see page 3, line 24 - line 27; figure 1 2-4,7 Α GB 2 243 264 A (RANK CINTEL LTD) 23 Α October 1991 see page 1, line 29 - page 2, line 9; figure 3 1-4 WO 86 05641 A (EASTMAN KODAK CO) 25 A September 1986 see page 3, line 15 - line 22 -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. "T" later document published after the international filing date or priority date and not in conflict with the application but Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention *E* earlier document but published on or after the international cannot be considered novel or cannot be considered to filing date involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the citation or other special reason (as specified) document is combined with one or more other such docu "O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means *P* document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 2 8. 01. 98 26 September 1997 Authorized officer 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, BEQUET, T Fax: (+31-70) 340-3016

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Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No				
gory °	Citation of document, with indication, where appropriate, of the relevant passages	rieleyant to Jiami No.		
	DE 24 42 273 A (AGFA GEVAERT AG) 18 March 1976	7		
	see page 4, line 5 - line 19			
		e I		

n ational application No.

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Box i Observations where certain claims were found unsearchable (Continuation of item 1 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.: 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:
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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
 claims 1-10: high resolution image capture system claims 11,12: image registration mechanism
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
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.:
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.: 1-10
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

information on patent family members

Interns. .al Application No
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2270230 A	02-03-94	JP 6082305 A DE 4327944 A	22-03-94 03-03-94
GB 2243264 A	23-10-91	GB 2244626 A,B US 5299014 A	04-12-91 29 - 03-94
WO 8605641 A	25-09-86	US 4638371 A EP 0215847 A JP 62502233 T	20-01-87 01-04-87 27-08-87
DE 2442273 A	18-03-76	NONE	