



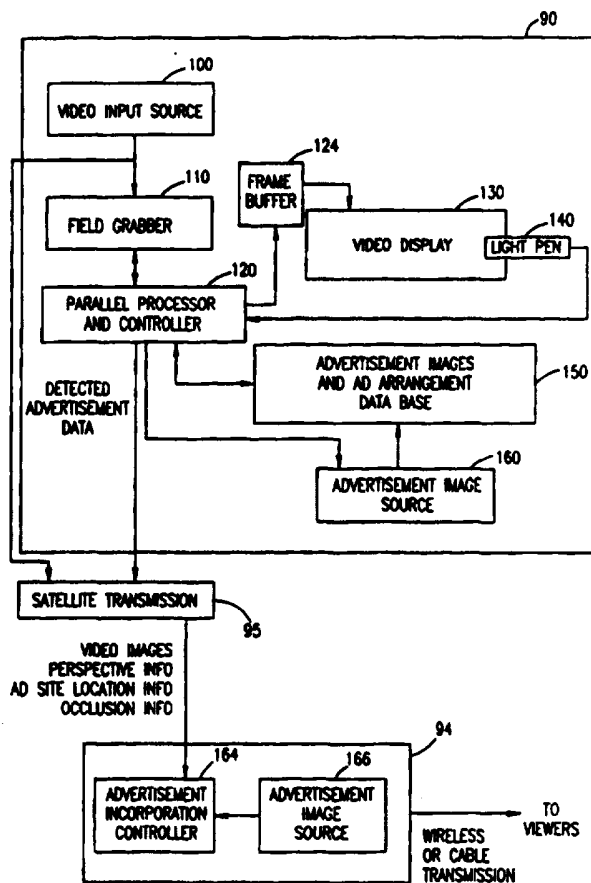
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification <sup>6</sup> : <b>H04N 5/262, 5/272, 5/222</b></p>	<p><b>A3</b></p>	<p>(11) International Publication Number: <b>WO 96/05689</b> (43) International Publication Date: 22 February 1996 (22.02.96)</p>
<p>(21) International Application Number: PCT/US95/09946 (22) International Filing Date: 4 August 1995 (04.08.95) (30) Priority Data: 110573 4 August 1994 (04.08.94) IL (71) Applicant (for all designated States except US): ORAD, INC. [US/US]; c/o Law Offices of Morse Geller, Suite 202, 116-16 Queens Boulevard, Forest Hills, NY 11375 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): TAMIR, Michael [IL/IL]; 13 Beit Zuri Street, 69122 Tel Aviv (IL). SHARIR, Avi [IL/IL]; 21 Ani Ma'amin Street, 67727 Ramat Hasharon (IL). (74) Agents: GALLOWAY, Peter, D.; Ladas &amp; Parry, 26 West 61st Street, New York, NY 10023 (US) et al.</p>	<p>(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).</p> <p><b>Published</b> <i>With international search report.</i></p> <p>(88) Date of publication of the international search report: 6 June 1996 (06.06.96)</p>	

(54) Title: APPARATUS AND METHOD FOR VIDEO BROADCASTING

(57) Abstract

This invention discloses an apparatus (90) for replacing a portion of each of a sequence of existing images with a new image, the apparatus comprises a frame grabber (110) operative to grab a sequence of frames respectively representing the sequence of existing images, a localizer (120) operative to detect at least one site within each existing image at which the new image is to be incorporated, a perspective transformer (120) operative to detect the perspective at which the site is imaged and a transmitter (95) operative to transmit to each of a plurality of remote locations (94), for each frame the existing image represented in the frame, the coordinates of the site, and the perspective at which the site is imaged.



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GA	Gabon				

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US95/09946

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) :H04N 5/262, 5/272, 5/222  
US CL :348/722, 461, 9, 588, 589, 600

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)

U.S. : Please See Extra Sheet.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
none

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US, A, 5,264,933 (ROSSER et al.) 23 November 1993, see the entire document.	1-10
Y,P	US, A, 5,436,672 (MEDIONI ET AL.) 25 July 1995, see abstract and FIG. 1.	1-10
A	US, A, 5,029,014 (LINDSTROM) 02 July 1991, see FIG.1.	1, 2
A	US, A, 5,424,770 (SCHMELZER ET AL.) 13 June 1995, see abstract and column 3, line 40 through column 6, line 29.	1-10
A	US, A, 5,200,825 (PERINE) 06 April 1993, FIG. 1 and column 2, line 37 to column 3, line 52.	1-10

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

* Special categories of cited documents:	*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
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*L	*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
*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
		document member of the same patent family

Date of the actual completion of the international search

12 NOVEMBER 1995

Date of mailing of the international search report

26 JAN 1996

Name and mailing address of the ISA/US  
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## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US95/09946

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US, A, 5,283,639 (ESCH ET AL.) 01 February 1994, column 1, line 42 to column 2, line 68.	1-10
A,P	US, A, 5,355,450 (GARMON ET AL.) 11 October 1994, column 9, line 19 to column 11, line 36.	1-10
A	US, A, 4,974,085 (CAMPBELL ET AL.) 27 November 1990, FIG. 1.	1-10

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US95/09946

**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international 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:
  
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 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:

Please See Extra 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 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.:
  
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.:  
1-10

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US95/09946

## B. FIELDS SEARCHED

Minimum documentation searched

Classification System: U.S.

348/720-722, 461, 9, 588, 589, 598-600, 705, 586, 584, 578, 576, 571, 552, 473

IPC(6): H04N 5/262, 5/272, 5/222, 5/265, 5/268, 5/278

## BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-10, drawn to an apparatus for replacing a portion of each of a sequence of existing images with a new image, which is classified in class 348, subclass 584.

Group II, claims 11-17, drawn to a real-time video processor and a method for controlling pipelined performance of a multi-task video processor, which is classified in class 348, subclass 571.

The inventions listed as Groups I and II do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The claims of Group I describe an apparatus and method for replacing one image or a portion of one image with another image whereas the claims of group II describe an apparatus and method for controlling flow of image data over a data bus. The inventions of the two groups do not share the same special technical features and they are directed to different inventive concepts.