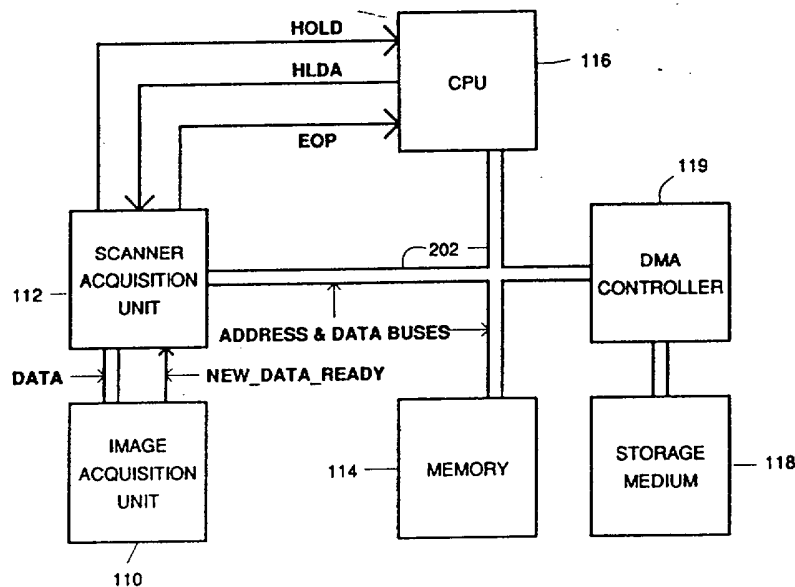




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<p>(21) International Application Number: PCT/US90/02889 (22) International Filing Date: 15 May 1990 (15.05.90) (30) Priority data: 90385 23 May 1989 (23.05.89) IL (71)(72) Applicant and Inventor: ISAACSON, Joel [US/IL]; 9 Skolnick Street, 76 100 Rehovot (IL). (74) Agents: GALLOWAY, Peter, D. et al.; Ladas & Parry, 26 West 61 Street, New York, NY 10023 (US). (81) Designated States: AT (European patent), BE (European patent), CA, CH (European patent), DE (European patent)*, DK (European patent), ES (European patent), FR (European patent), GB (European patent), IT (European patent), JP, LU (European patent), NL (European patent), SE (European patent), US.</p>		<p>Published <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> (88) Date of publication of the international search report: 4 April 1991 (04.04.91)</p>

(54) Title: APPARATUS AND METHOD FOR IMAGE PROCESSION



(57) Abstract

A system for and methods of image processing are disclosed. The system comprises image acquisition apparatus (110) for acquiring pixels of a digital image, permutation apparatus (112) for receiving the pixels, for reordering pixels of the digital image into a plurality of abstracted images at a large reduction factor and for combining the abstracted images into many sets of abstracted images combinable into abstracted images at different small reduction factors and storage apparatus (114) for receiving and for storing the abstracted sets of digital images. One method comprises an efficient way of rotating images stored as abstracted images. Other methods enable transformation between different storage formats.

* See back of page for further information.

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International Application No **PCT/US90/02889**

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ³			
According to International Patent Classification (IPC) or to both National Classification and IPC			
IPC (5) :	G06K 9/56		
U.S. Cl :	382/41,47		
II. FIELDS SEARCHED			
Minimum Documentation Searched ⁴			
Classification System	Classification Symbols		
U.S.	382/41,44-47,49,56; 364/518		
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁵			
III. DOCUMENTS CONSIDERED TO BE RELEVANT ¹⁴			
Category ⁶	Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷		Relevant to Claim No. ¹⁴
X	US,A 4,790,025 (INOUE ET AL) 06 December 1988 See Figures 1 and 12B, Column 1, Lines 18-43 and Column 10, Lines 45-57 for example.		1-15 & 19-20
X	US,A 4,661,987 (ANDERSON ET AL) 28 April 1987 See Figures 1 and 5-7A, Column 5, Lines 33-45 and Column 12, Line 25 through Column 13, Line 9.		1-15 & 19-20
Y,P	US,A 4,850,028 (KAWAMURA ET AL) 18 July 1989 See Figures 1-7 and Column 1, Lines 11-23.		1-15 & 19-20
Y	(BARNSLEY ET AL) "A Better Way to Compress Images", <u>BYTE</u> , January 1988, 8 pages.		16-18
Y	(BARNSLEY ET AL) "Fractal Modelling of Real World Images", <u>SIGGRAPH</u> 1987, pp. 1-39.		16-18
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13 JULY 1990		05 FEB 1991	
International Searching Authority ¹		Signature of Authorized Official ¹	
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