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[Continued on next page]

(54) Title: SYSTEM AND METHOD OF IMPROVING THE LEGIBILITY AND APPLICABILITY OF DOCUMENT PICTURES USING FORM BASED IMAGE ENHANCEMENT

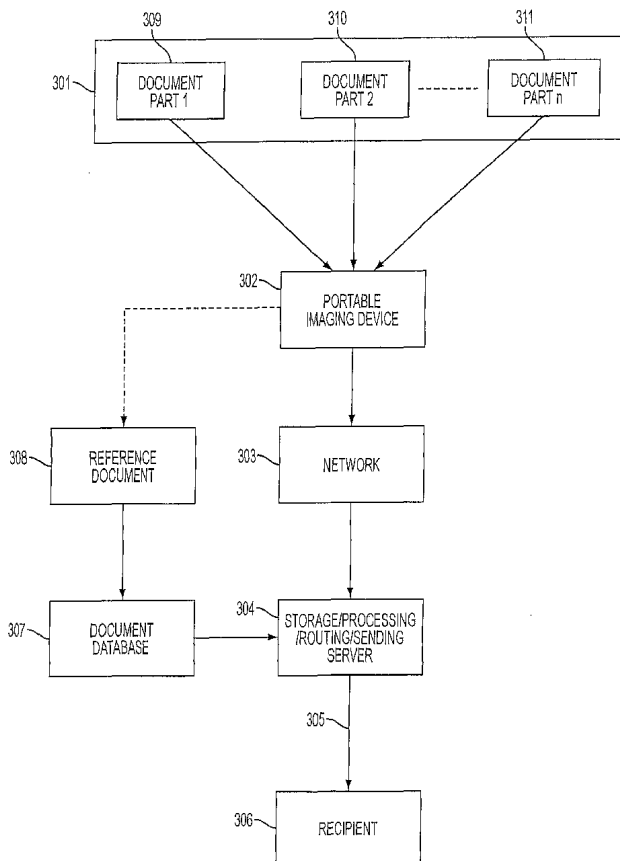


FIG. 3

(57) Abstract: A system and method for imaging a document, and using a reference document to place pieces of the document in their correct relative position and resize such pieces in order to generate a single unified image, including the electronic capturing a document with one or multiple images using an imaging device, the performing of pre-processing of said images to optimize the results of subsequent image recognition, enhancement, and decoding, the comparing of said images against a database of reference documents to determine the most closely fitting reference document, and the applying of knowledge from said closely fitting reference document to adjust geometrically the orientation, shape, and size of said electronically captured images so that said images correspond as closely as possible to said reference document.

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16 April 2009

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER IPC: G06K 9/00(2006.01) USPC: 382/112,113,219,233;358/1.2,538,451,452 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. : 382/112,113,219,233; 358/1.2,538,451,452 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 practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,345,130 A (Dahl) 05 February 2002, all column.	1-15
A	US 5,987,176 A (Imaizumi et al) November 1999, all column.	1-15
A	US 5,897,648 A (Henderson) 27 April 1999, all column.	1-15
A	US 5,859,920 A (Daly et al) 12 January 1999, all column.	1-15
A	US 5,740,505 A (Kusumoto et al) 14 April 1998, all column.	1-15
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier application or patent published on or after the international filing date	"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
"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)	"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 05 September 2008 (05.09.2008)		Date of mailing of the international search report 18 SEP 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer YOSEF KASSA Telephone No. 571 272 7452

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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:

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 No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation 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 additional fees, this Authority did not invite payment of any additional fees.
 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.: 1-15
- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
 - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
 - No protest accompanied the payment of additional search fees.

BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

Group I, claims 1-15, drawn to two images corresponding to one reference image.

Group II, Claims 16-20, drawn to one image corresponding to one reference image. This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.