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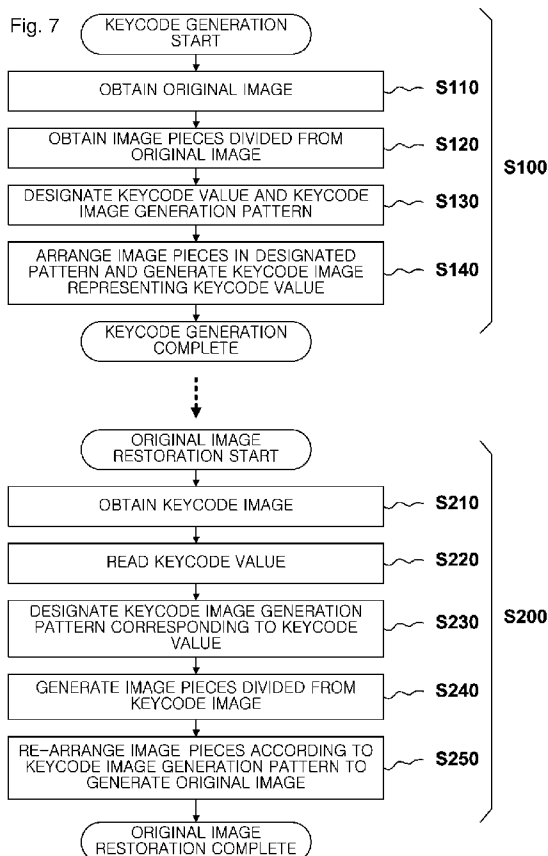
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Published:

— with international search report

[Continued on next page]

(54) Title: PUZZLE TYPED KEYCODE WITH IMAGE, AND SECURITY SYSTEM AND METHOD USING IT



(57) Abstract: Disclosed is an image puzzle-type keycode, and a system and a method for securing information. In the system and method for securing an image using the image puzzle-type keycode, an original image (10) including a photograph, a picture, a character, a number, a fingerprint, or an iris image is divided into image pieces and the divided image pieces are re-arranged so as to generate a keycode image (20), and the original image (10) is restored from the keycode image (20) as necessary. Therefore, the system and method can efficiently prevent information from being leaked using the keycode image (20), thereby performing the identity identification and authentication process while maintaining the security not to disclose personal information or personal physical information such as a fingerprint, the iris of eyes.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) **Date of publication of the international search report:**

26 February 2009

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2008/003732**A. CLASSIFICATION OF SUBJECT MATTER****G06T 1/00(2006.01)i**

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 8 G06T, G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS, SEARCH TERMS: KEYCODE IMAGE, SECURITY, and similar terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-1999-0024950 A (KD TELECOM CO., LTD.), 06 April 1999 See abstract, page3, lines 39-52	1-13
A	JP 2001-168854 A (SONY CO., LTD.), 22 June 2001 See abstract, page12, paragraph[0084]-page13, paragraph[0095]	1-13
A	KR 10-2002-0096115 A (KOREA SECURITY PRINTING & MINTING CORP. et al.), 31 December 2002 See abstract	1-13
A	US 005337362 A (MICHAEL J. GORMISH et al.), 09 August 1994 See abstract	1-13

☐ Further documents are listed in the continuation of Box C.☒ 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

"E" earlier application or patent 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 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

24 DECEMBER 2008 (24.12.2008)

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Name and mailing address of the ISA/KR

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2008/003732**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.: 15-16
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 15-16 depend on the unsearchable claim 14 which do not comply with PCT Rule 6.4(a).
3. ☒ Claims Nos.: 14
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:

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.:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/003732

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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