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(54) **Title:** SYSTEMS, METHODS AND COMPUTER READABLE MEDIA FOR APPLICATION-LEVEL AUTHENTICATION OF MESSAGES IN A TELECOMMUNICATIONS NETWORK

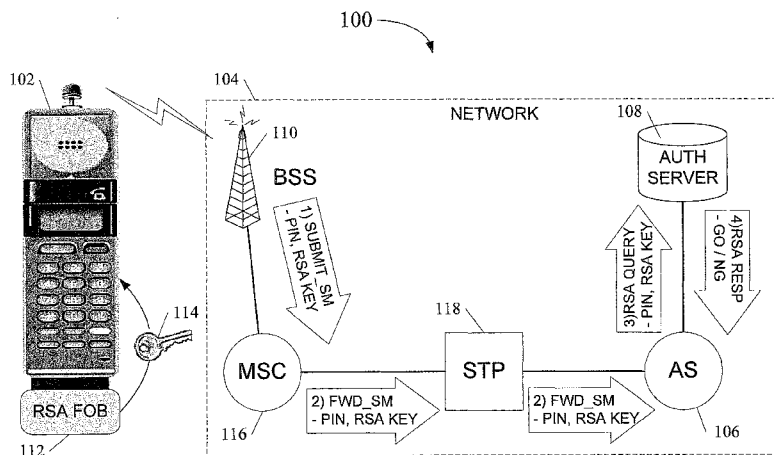


FIG. 1

(57) **Abstract:** Systems, methods, and computer readable media for application-level authentication in a telecommunications network are disclosed. According to one aspect, the subject matter described herein includes a method for application-level authentication of messages in a telecommunications network. The method includes, at a node in a telecommunications network, receiving, from a personal communications device having a user, a message requiring application-level authentication, the message including information associated with the user and incorporating first authentication information associated with the user, the first authentication information being provided from a source that is not the user of the personal communications device. A request for second authentication information associated with the user is sent to an authentication server. Second authentication information associated with the user is received from the authentication server, and the authenticity of the message is determined based on the second authentication information associated with the user.

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**A. CLASSIFICATION OF SUBJECT MATTER*****H04W 12/06(2009.01)i, H04W 4/14(2009.01)i, H04L 9/32(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 9: H04W, H04L, H04Q, H04B

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)

eKOMPASS(KIPO internal) &amp; keywords: "application-level, authentication, message, password, server"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007-0186115 A1 (GAO, XIANG et al.) 09 Aug. 2007 See abstract, figure 6, paragraphs [0037]-[0041], [0072]-[0079], and claims 1-10.	1-50
X	US 2007-0067828 A1 (BYCHKOV, EYAL) 22 Mar. 2007 See abstract, figure 4, paragraphs [0007], [0078]-[0081], and claims 1-3,6.	1-50
A	US 2007-0174904 A1 (PARK, NOOL) 26 Jul. 2007 See abstract, figure 2, paragraphs [0016]-[0023], and claim 10.	1-50
A	US 2006-0098678 A1 (TAN, CLARENCE NYAP) 11 May 2006 See abstract, figure 10, paragraphs [0069]-[0092], and claim 1.	1-50
A	US 2005-0215231 A1 (BAUCHOT, FREDERIC et al.) 29 Sep. 2005 See abstract, figure 1, paragraphs [0014]-[0016], and claim 1.	1-50
A	KR 10-2004-0083272 A (BANKTOWN.CO., LTD.) 01 Oct. 2004 See abstract, figure 2, and claim 2.	1-50
A	JP 2007-058469 A (NOMURA RESEARCH INSTITUTE LTD) 08 Mar. 2007 See abstract.	1-50

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

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"&amp;" document member of the same patent family

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007-0186115 A1	09.08.2007	None	
US 2007-0067828 A1	22.03.2007	None	
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US 2006-0098678 A1	11.05.2006	None	
US 2005-0215231 A1	29.09.2005	None	
KR 10-2004-0083272 A	01.10.2004	None	
JP 2007-058469 A	08.03.2007	None	