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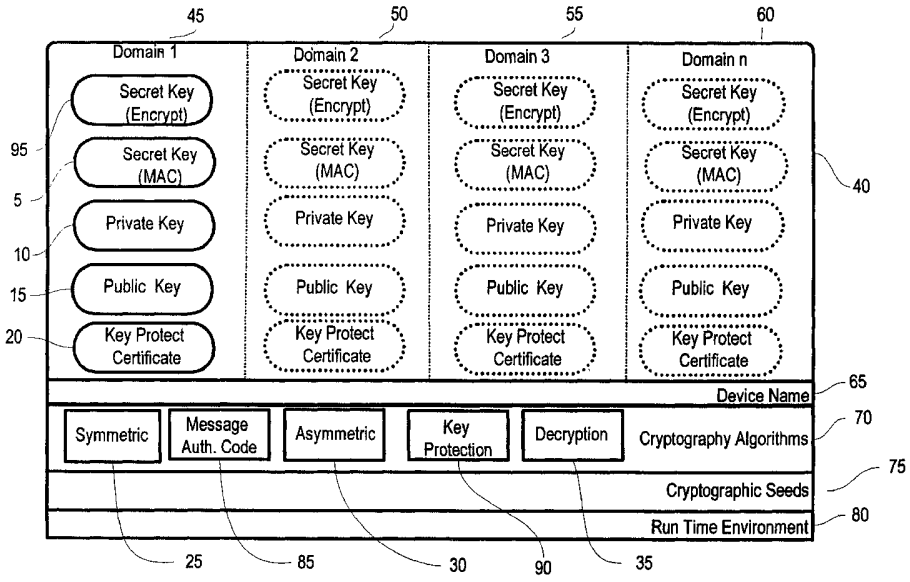
(54) Title: A METHOD AND SYSTEM FOR GENERATING AND VERIFYING A KEY PROTECTION CERTIFICATE.



(57) Abstract: A data processing method and system for generating and verifying a key protection certificate. The data processing system comprises a Personal Security Device (40) including a unique device name (65), cryptography means, data processing means, data storage means and communications means. The cryptography means includes an asymmetric key pair generating algorithm (30), a first securely shared secret key, a second securely shared secret key, symmetric cryptography means, a concatenation algorithm, a message authentication code algorithm, cryptographic seed information (75), a key protection certificate algorithm (90) and a signing algorithm.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L9/32 G07F7/10

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 7 H04L G07F

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 practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	MENEZES A J ET AL: "HANDBOOK OF APPLIED CRYPTOGRAPHY, PASSAGE" HANDBOOK OF APPLIED CRYPTOGRAPHY, CRC PRESS SERIES ON DISCRETE MATHEMATICES AND ITS APPLICATIONS, BOCA RATON, FL, CRC PRESS, US, 1997, page 552, 560, 564 XP002224033 ISBN: 0-8493-8523-7 page 33 page 552; figure 13.4 page 560, line 12 - line 25 page 564; figures 13.7,A ---	1-29
Y	EP 0 807 911 A (RSA DATA SECURITY INC) 19 November 1997 (1997-11-19) column 1, line 1 - line 20 column 13, line 24 -column 15, line 9 --- -/--	1-29

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 December 2002	10/01/2003

Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	DATABASE INSPEC 'Online! THE INSTITUTION OF ELECTRICAL ENGINEERS, STEVENAGE, GB; March 2000 (2000-03) STUHLMULLER R: "User identity: the key to safe authentication LAN/WAN security" Database accession no. 6574108 XP002224034 abstract ----	1-29

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0807911 A	19-11-1997	US 6085320 A	04-07-2000
		EP 0807911 A2	19-11-1997
		JP 11003033 A	06-01-1999
		US 6189098 B1	13-02-2001