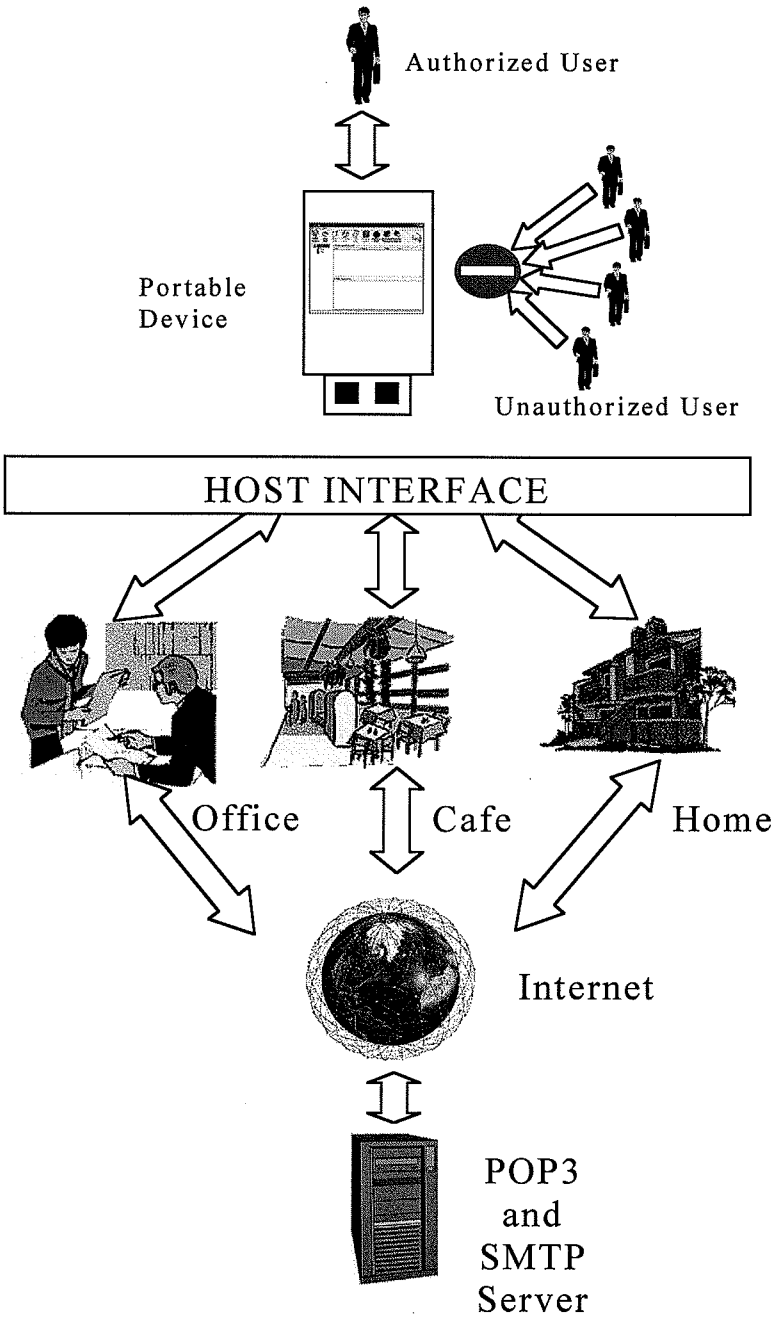

Authorized User
Portable
Device
Unauthorized User
HOST INTERFACE
Office
Cafe
Home
Internet
POP3
and
SMTP
Server

FIG 1

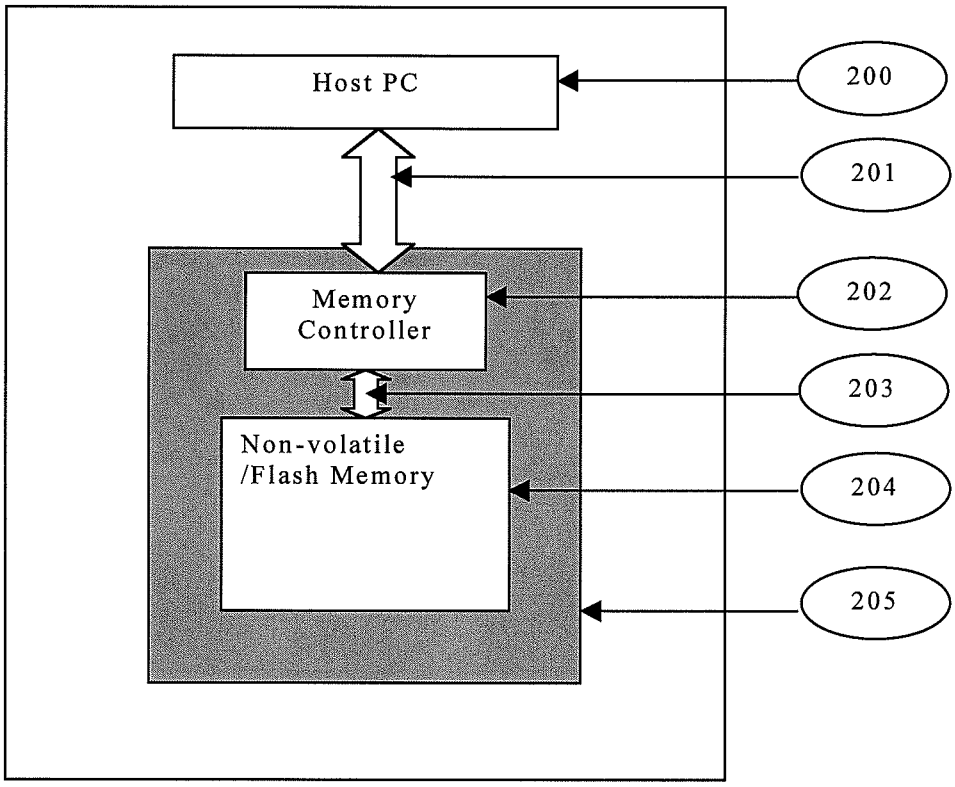

Host PC
Memory Controller
Non-volatile /Flash Memory
200
201
202
203
204
205

FIG 2

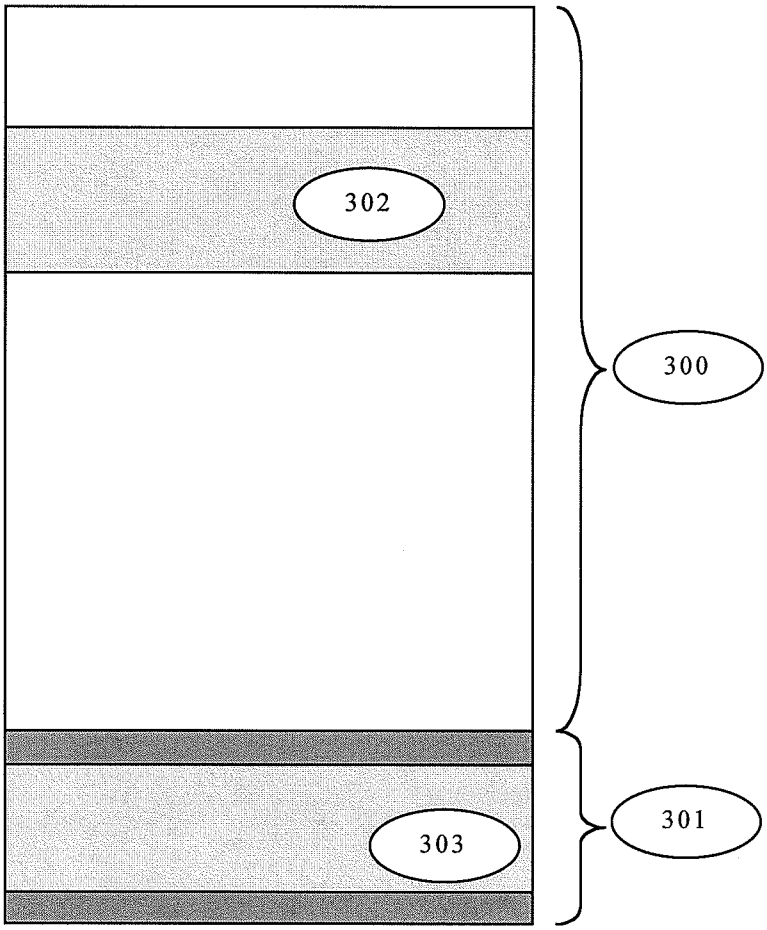


FIG 3

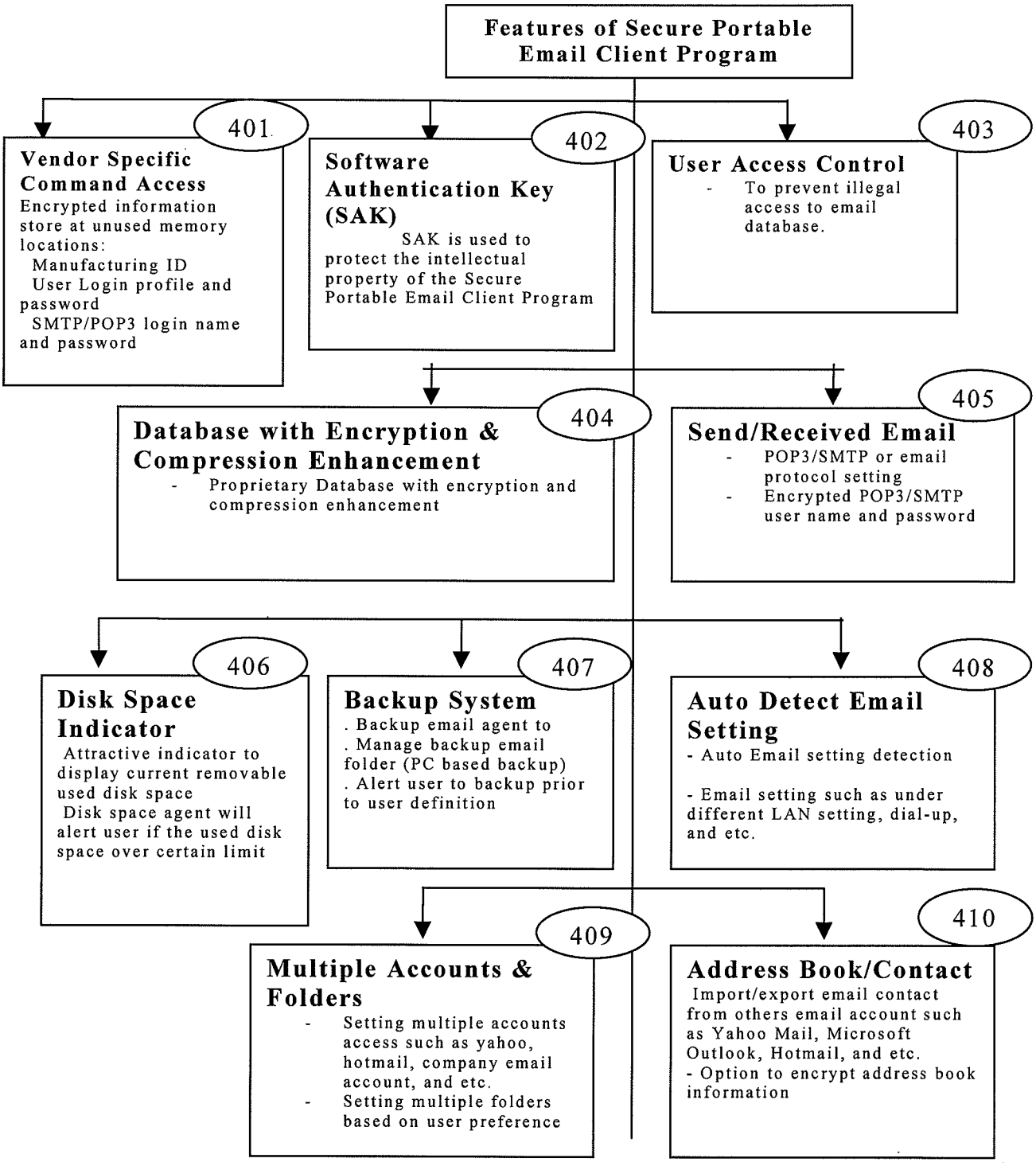

Features of Secure Portable Email Client Program
401
Vendor Specific Command Access
Encrypted information store at unused memory locations:
Manufacturing ID
User Login profile and password
SMTP/POP3 login name and password
402
Software Authentication Key (SAK)
SAK is used to protect the intellectual property of the Secure Portable Email Client Program
403
User Access Control
- To prevent illegal access to email database.
404
Database with Encryption & Compression Enhancement
- Proprietary Database with encryption and compression enhancement
405
Send/Received Email
- POP3/SMTP or email protocol setting
- Encrypted POP3/SMTP user name and password
406
Disk Space Indicator
Attractive indicator to display current removable used disk space
Disk space agent will alert user if the used disk space over certain limit
407
Backup System
. Backup email agent to
. Manage backup email folder (PC based backup)
. Alert user to backup prior to user definition
408
Auto Detect Email Setting
- Auto Email setting detection
- Email setting such as under different LAN setting, dial-up, and etc.
409
Multiple Accounts & Folders
- Setting multiple accounts access such as yahoo, hotmail, company email account, and etc.
- Setting multiple folders based on user preference
410
Address Book/Contact
Import/export email contact from others email account such as Yahoo Mail, Microsoft Outlook, Hotmail, and etc.
- Option to encrypt address book information

FIG 4

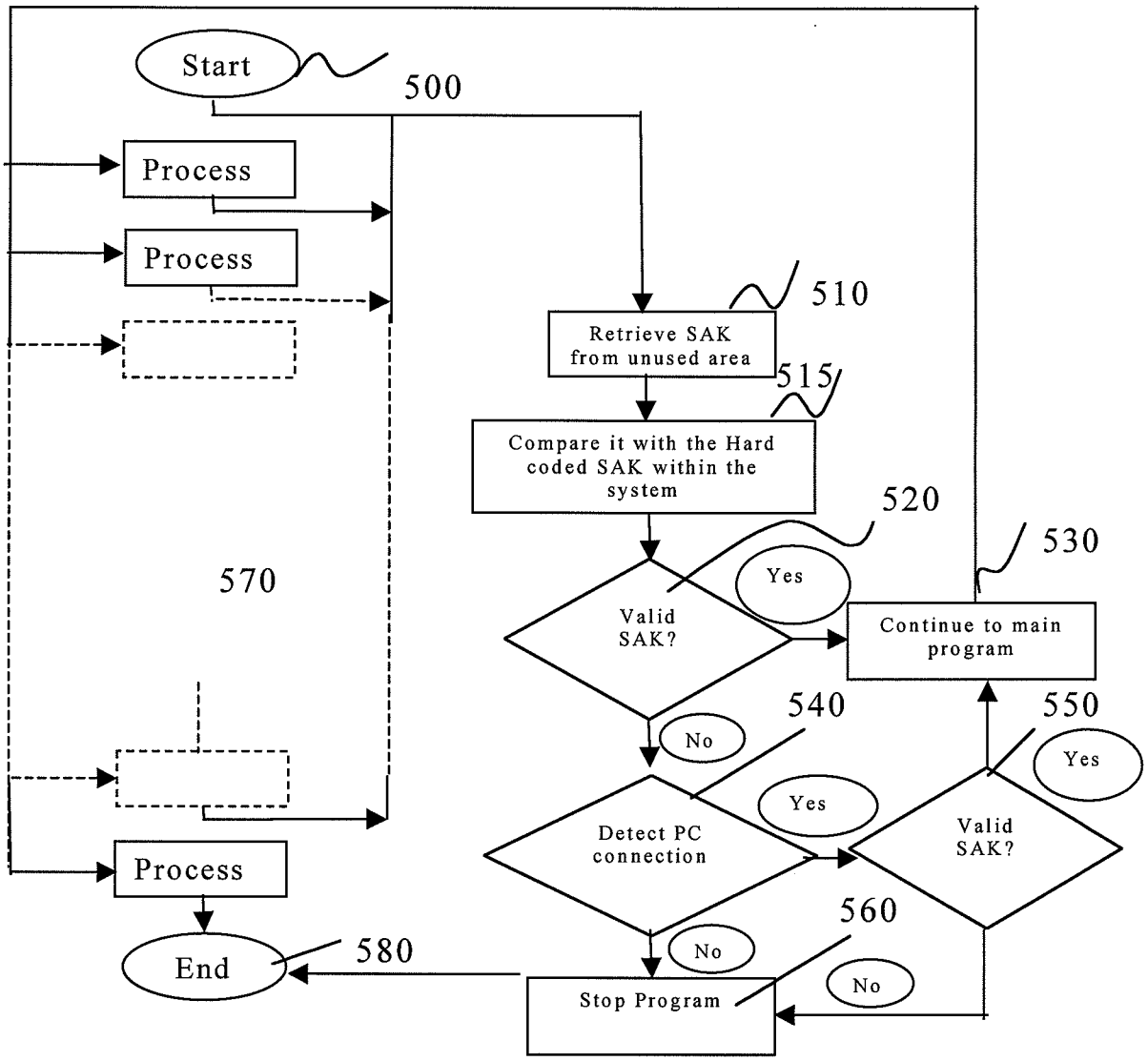

Start
500
Process
Process
510
Retrieve SAK from unused area
515
Compare it with the Hard coded SAK within the system
520
530
570
Yes
Valid SAK?
Continue to main program
540
550
No
Yes
Yes
Detect PC connection
Valid SAK?
Process
560
No
No
End
580
Stop Program

FIG 5

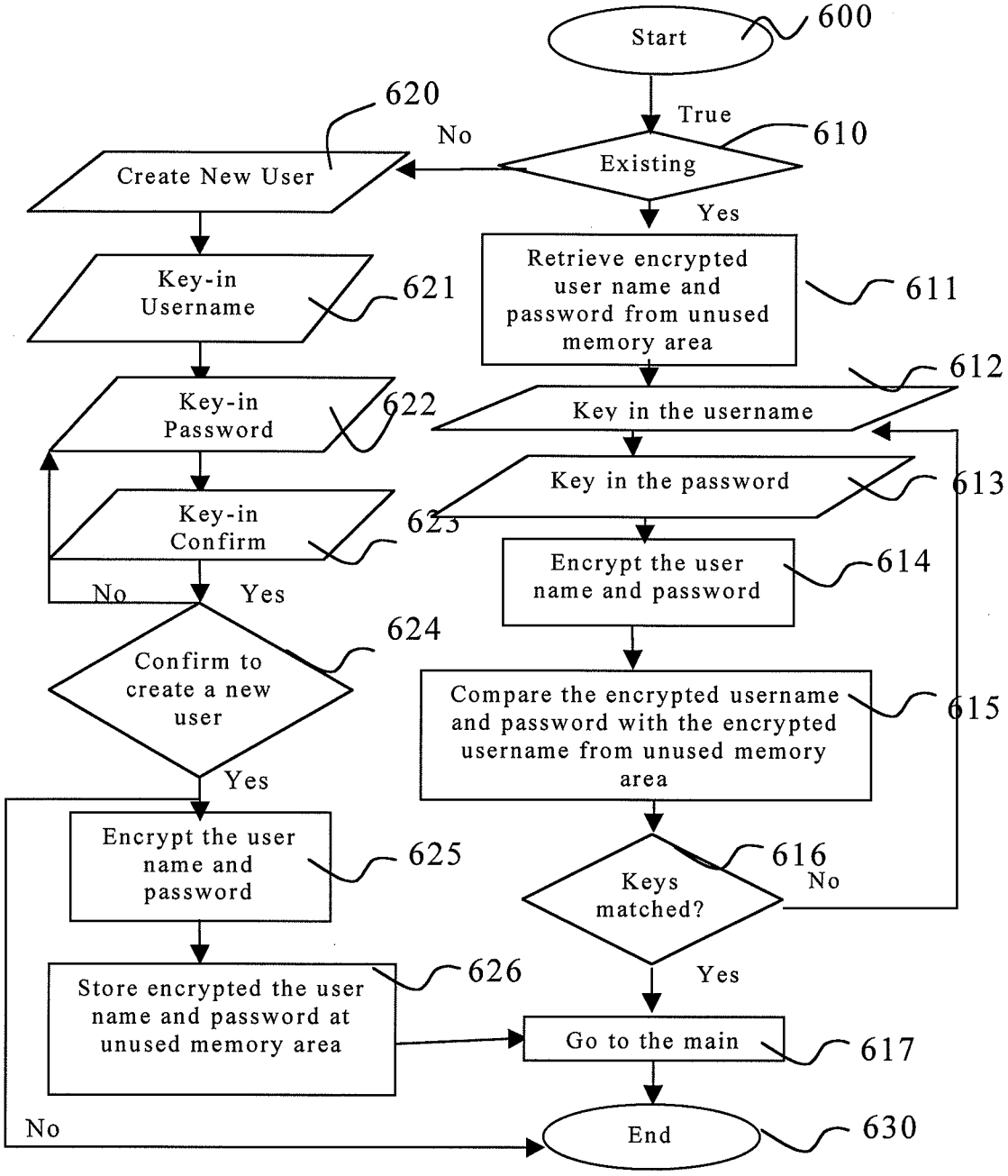

Start
600
True
Existing
610
No
620
Create New User
Yes
Retrieve encrypted user name and password from unused memory area
611
Key-in Username
621
Key-in Password
622
612
Key in the username
Key in the password
613
Key-in Confirm
623
Encrypt the user name and password
614
No
Yes
624
Confirm to create a new user
Compare the encrypted username and password with the encrypted username from unused memory area
615
Yes
Encrypt the user name and password
625
Keys matched?
616
No
Store encrypted the user name and password at unused memory area
626
Yes
Go to the main
617
No
End
630

FIG 6

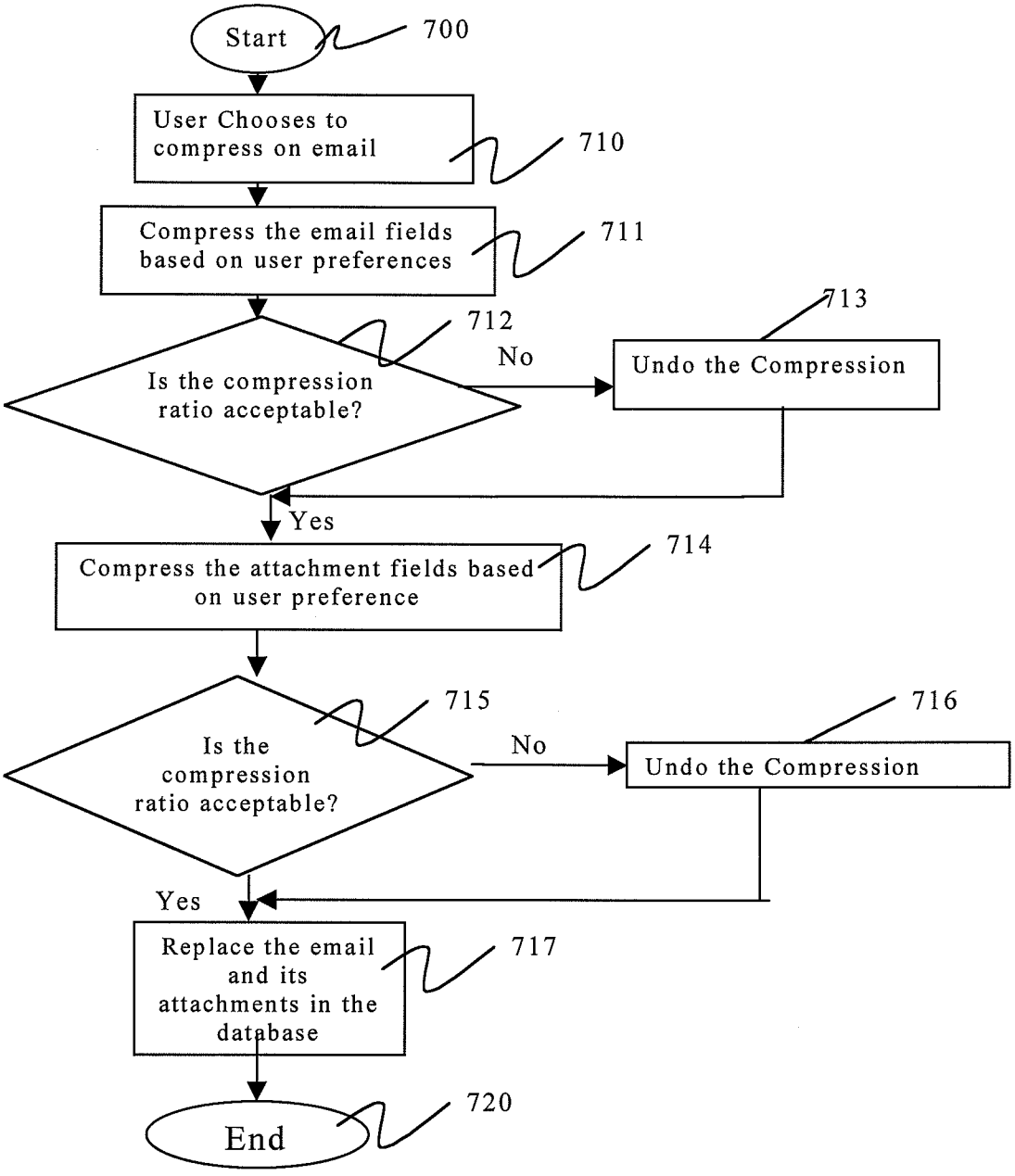

Start
700
User Chooses to compress on email
710
Compress the email fields based on user preferences
711
712
Is the compression ratio acceptable?
No
713
Undo the Compression
Yes
Compress the attachment fields based on user preference
714
715
Is the compression ratio acceptable?
No
716
Undo the Compression
Yes
Replace the email and its attachments in the database
717
End
720

FIG 7a

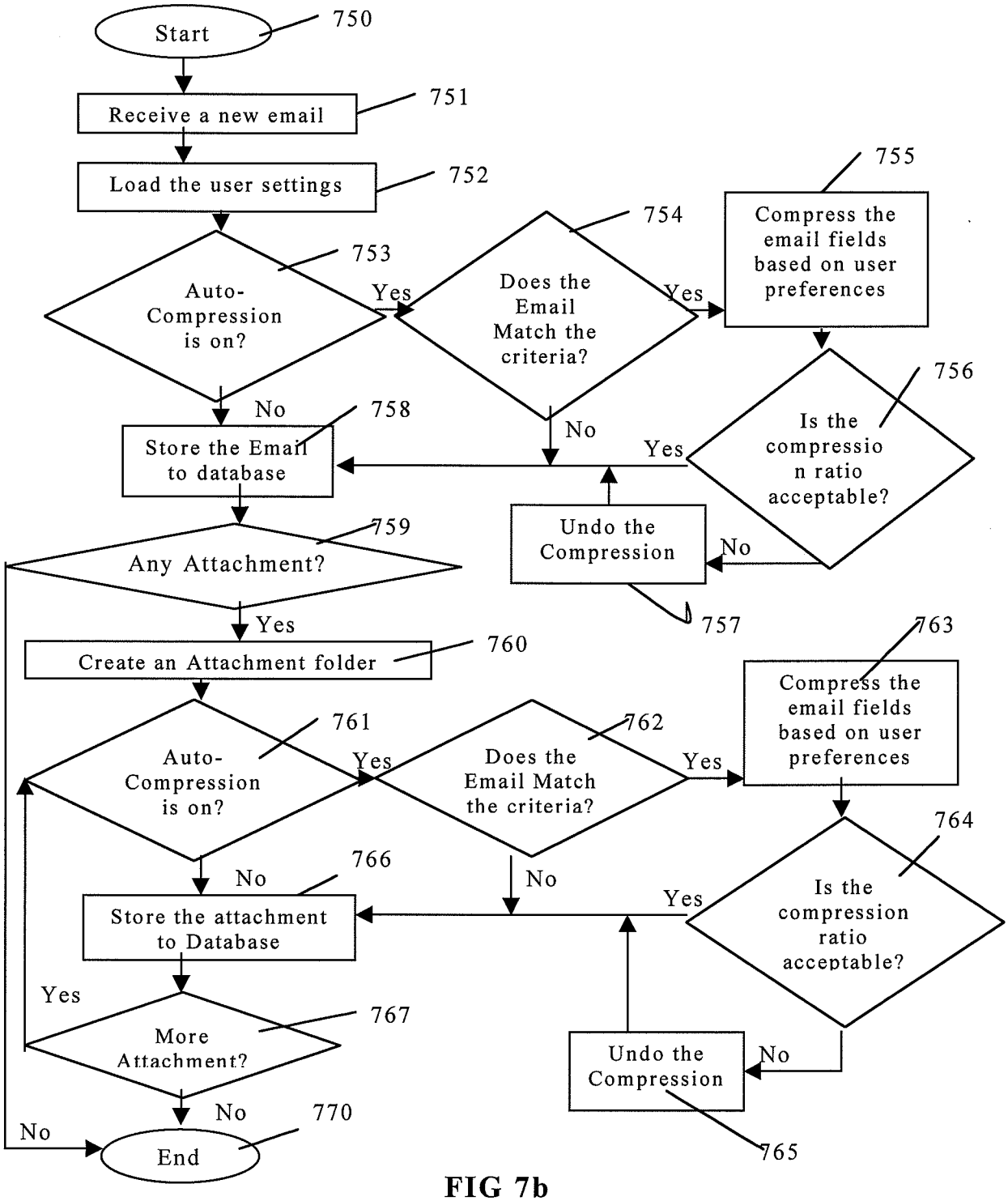

Start
750
Receive a new email
751
Load the user settings
752
Auto-Compression is on?
753
Yes
No
Does the Email Match the criteria?
754
Yes
No
Compress the email fields based on user preferences
755
Is the compressio n ratio acceptable?
756
Yes
No
Undo the Compression
757
Store the Email to database
758
Any Attachment?
759
Yes
Create an Attachment folder
760
Auto-Compression is on?
761
Yes
No
Does the Email Match the criteria?
762
Yes
No
Compress the email fields based on user preferences
763
Is the compression ratio acceptable?
764
Yes
No
Undo the Compression
765
Store the attachment to Database
766
More Attachment?
767
Yes
No
End
770
No

FIG 7b

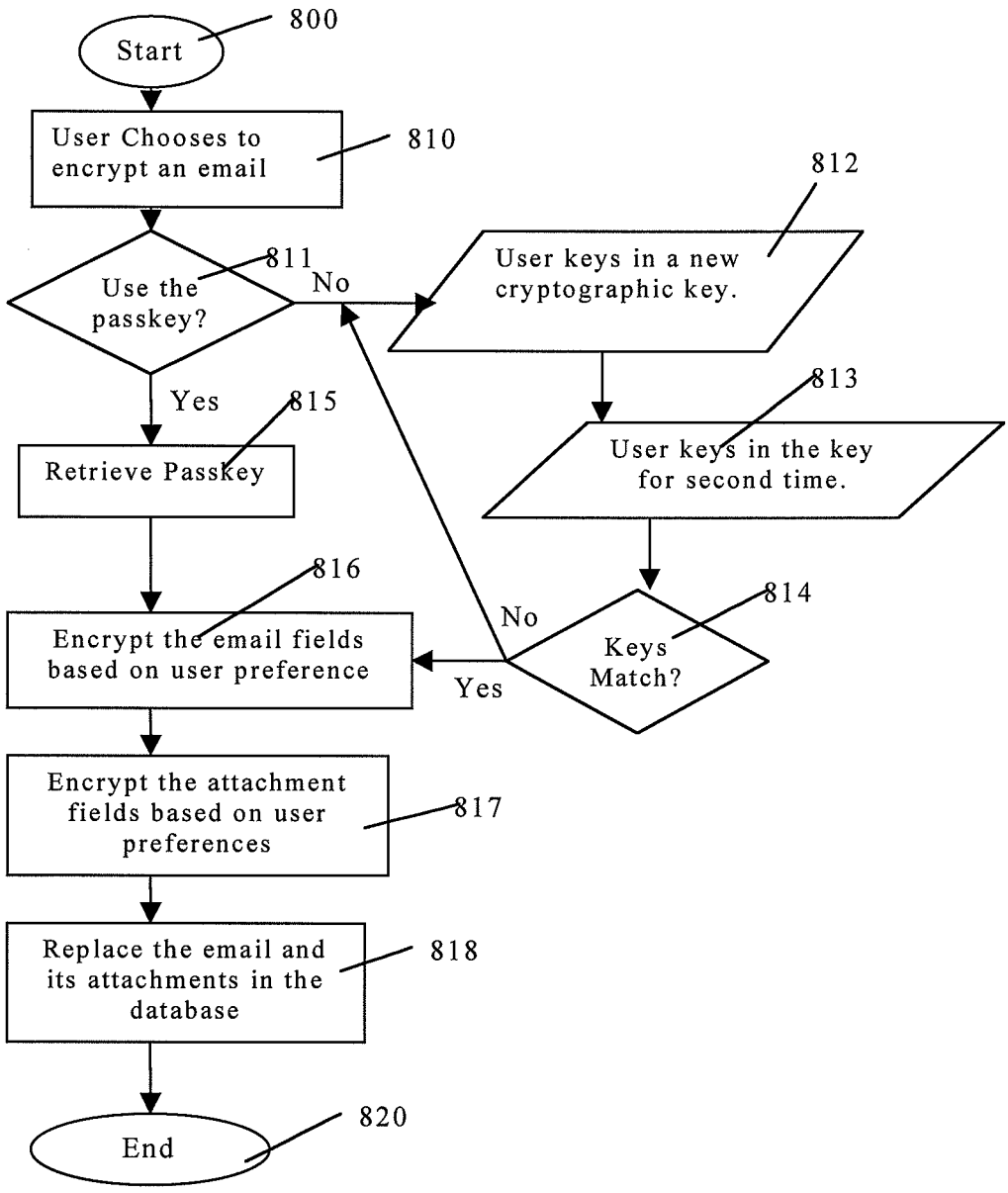

Start
800
User Chooses to encrypt an email
810
Use the passkey?
811
No
User keys in a new cryptographic key.
812
Yes
815
Retrieve Passkey
User keys in the key for second time.
813
816
Encrypt the email fields based on user preference
No
Keys Match?
814
Yes
Encrypt the attachment fields based on user preferences
817
Replace the email and its attachments in the database
818
End
820

FIG 8a

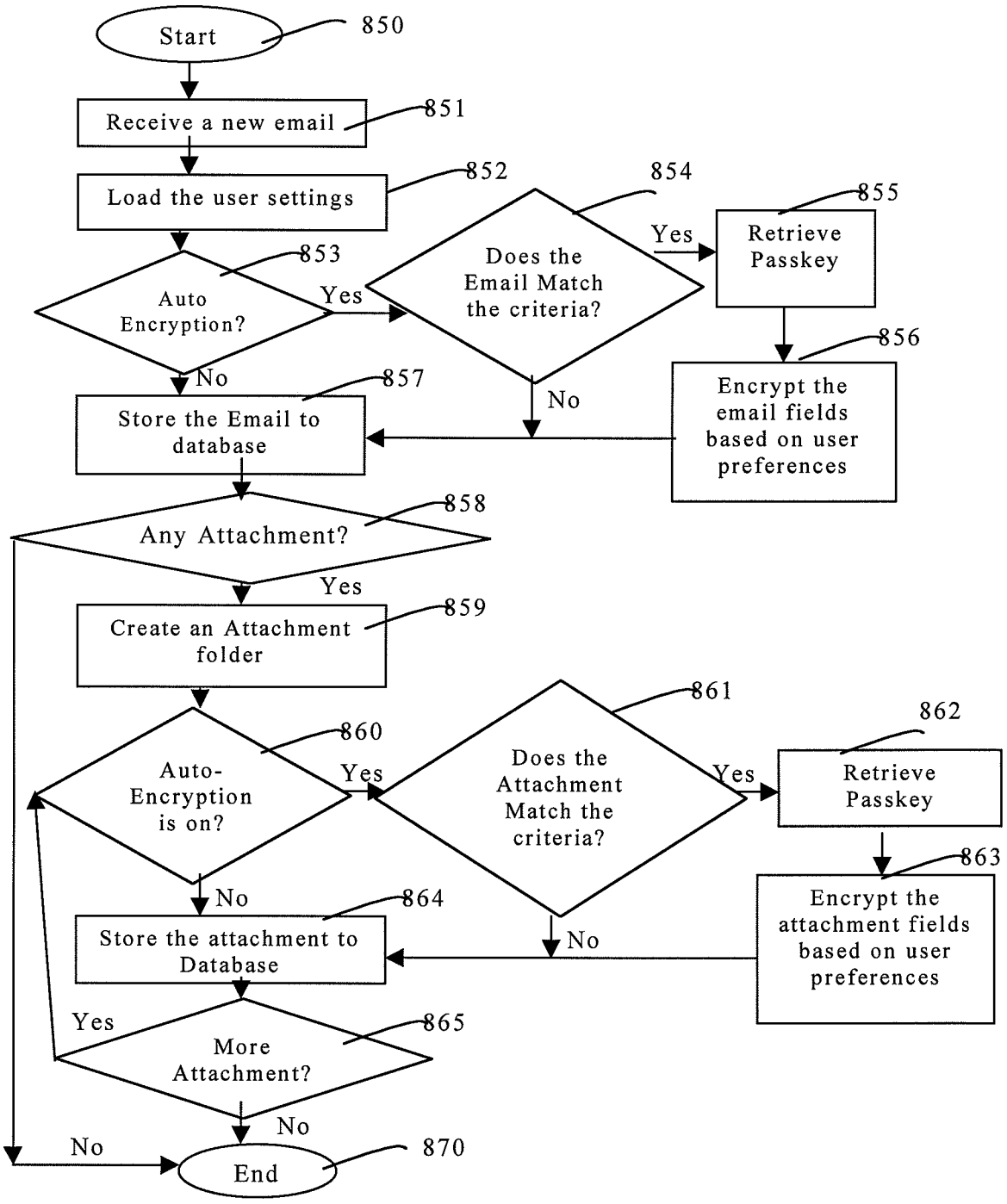

Start
850
Receive a new email
851
Load the user settings
852
853
Auto Encryption?
Yes
No
854
Does the Email Match the criteria?
Yes
No
855
Retrieve Passkey
856
Encrypt the email fields based on user preferences
857
Store the Email to database
858
Any Attachment?
Yes
859
Create an Attachment folder
860
Auto-Encryption is on?
Yes
No
861
Does the Attachment Match the criteria?
Yes
No
862
Retrieve Passkey
863
Encrypt the attachment fields based on user preferences
864
Store the attachment to Database
865
More Attachment?
Yes
No
870
End
No

FIG 8b

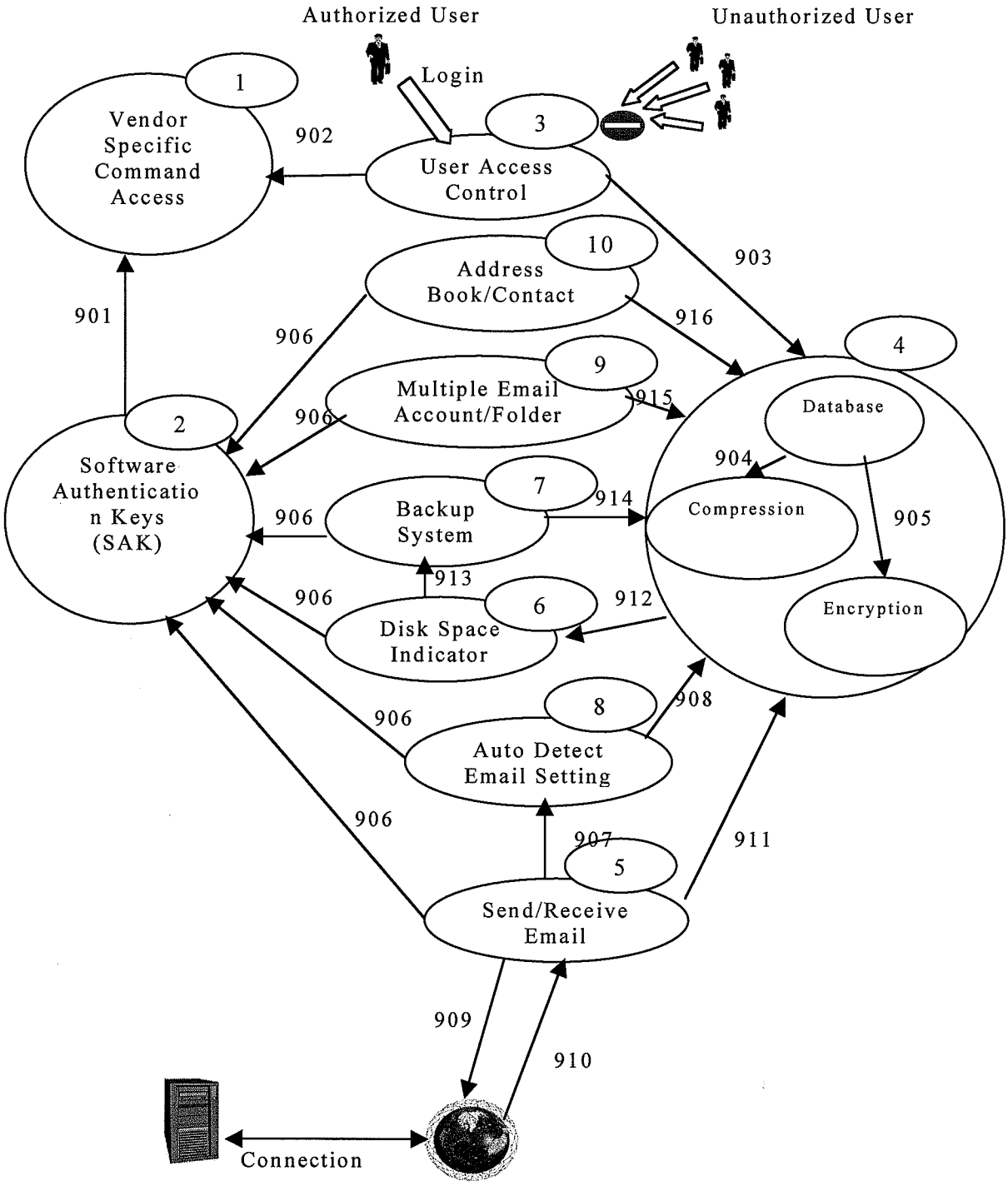

Authorized User
Unauthorized User
Login
1
Vendor Specific Command Access
902
3
User Access Control
903
10
Address Book/Contact
916
4
901
906
9
Multiple Email Account/Folder
915
Database
2
Software Authenticatio n Keys (SAK)
904
7
Backup System
914
Compression
905
906
913
6
Disk Space Indicator
912
Encryption
908
8
Auto Detect Email Setting
907
5
911
Send/Receive Email
909
910
Connection

FIG 9