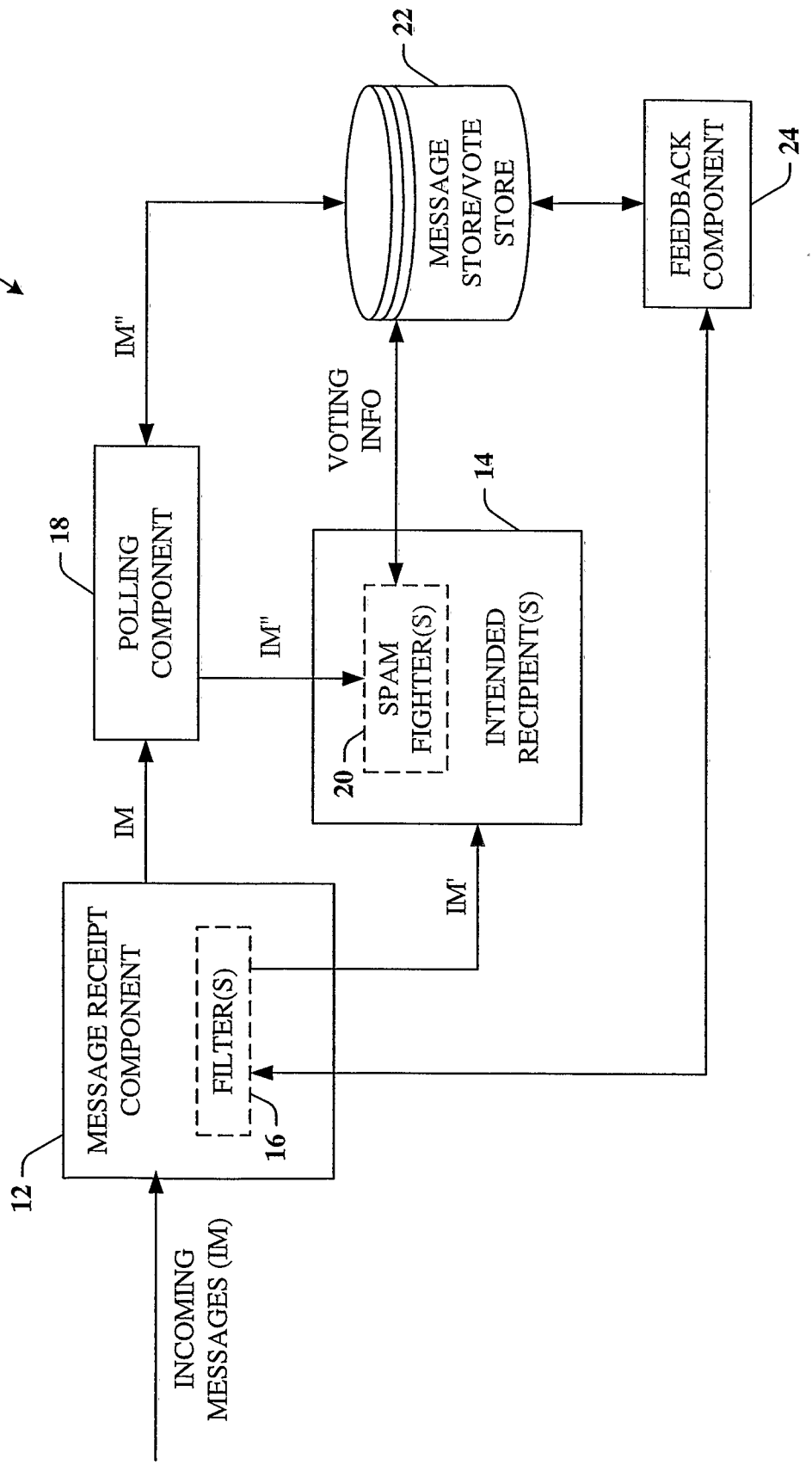

10
22
MESSAGE STORE/VOTE STORE
FEEDBACK COMPONENT
24
IM"
VOTING INFO
14
18
POLLING COMPONENT
IM"
SPAM FIGHTER(S)
20
INTENDED RECIPIENT(S)
IM
IM'
MESSAGE RECEIPT COMPONENT
FILTER(S)
16
12
INCOMING MESSAGES (IM)

FIG. 1A

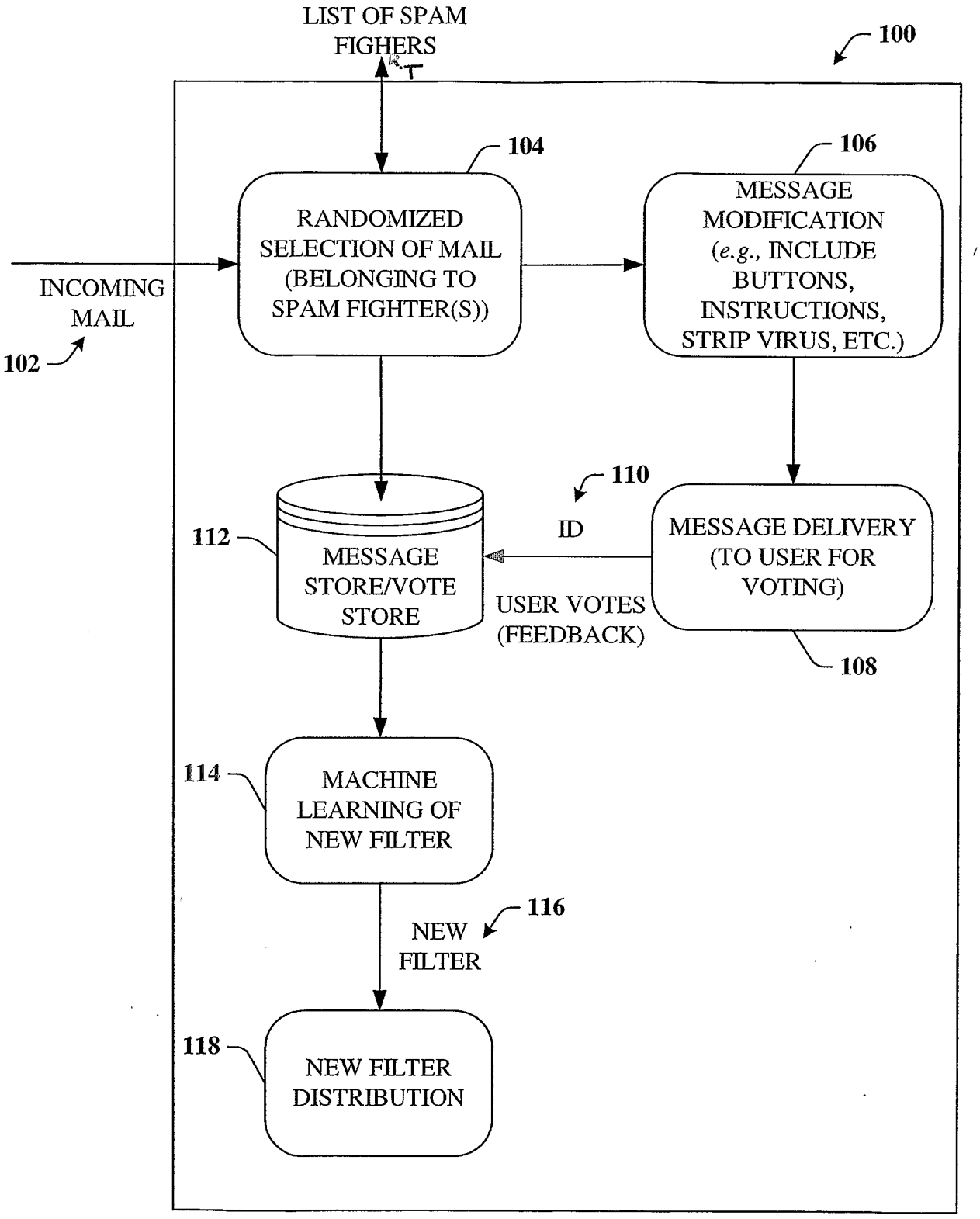

LIST OF SPAM FIGHERS
100
104
106
RANDOMIZED SELECTION OF MAIL (BELONGING TO SPAM FIGHTER(S))
MESSAGE MODIFICATION (e.g., INCLUDE BUTTONS, INSTRUCTIONS, STRIP VIRUS, ETC.)
INCOMING MAIL
102
110
ID
112
MESSAGE STORE/VOTE STORE
MESSAGE DELIVERY (TO USER FOR VOTING)
USER VOTES (FEEDBACK)
108
114
MACHINE LEARNING OF NEW FILTER
116
NEW FILTER
118
NEW FILTER DISTRIBUTION

FIG. 1B

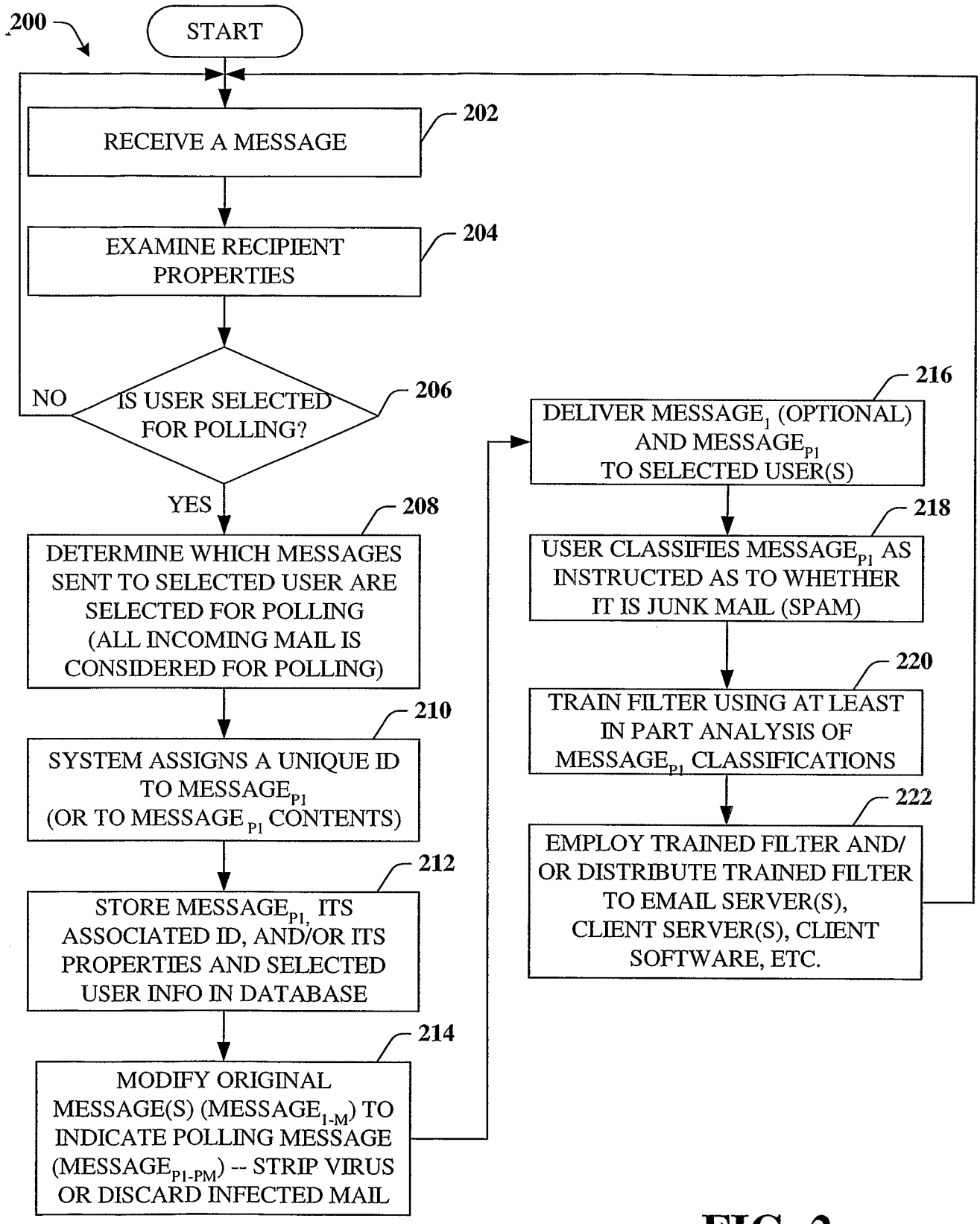

200
START
RECEIVE A MESSAGE
202
EXAMINE RECIPIENT PROPERTIES
204
IS USER SELECTED FOR POLLING?
206
NO
YES
DETERMINE WHICH MESSAGES SENT TO SELECTED USER ARE SELECTED FOR POLLING (ALL INCOMING MAIL IS CONSIDERED FOR POLLING)
208
SYSTEM ASSIGNS A UNIQUE ID TO MESSAGE$_{P1}$ (OR TO MESSAGE $_{P1}$ CONTENTS)
210
STORE MESSAGE$_{P1}$, ITS ASSOCIATED ID, AND/OR ITS PROPERTIES AND SELECTED USER INFO IN DATABASE
212
MODIFY ORIGINAL MESSAGE(S) (MESSAGE$_{1-M}$) TO INDICATE POLLING MESSAGE (MESSAGE$_{P1-PM}$) -- STRIP VIRUS OR DISCARD INFECTED MAIL
214
DELIVER MESSAGE$_1$ (OPTIONAL) AND MESSAGE$_{P1}$ TO SELECTED USER(S)
216
USER CLASSIFIES MESSAGE$_{P1}$ AS INSTRUCTED AS TO WHETHER IT IS JUNK MAIL (SPAM)
218
TRAIN FILTER USING AT LEAST IN PART ANALYSIS OF MESSAGE$_{P1}$ CLASSIFICATIONS
220
EMPLOY TRAINED FILTER AND/ OR DISTRIBUTE TRAINED FILTER TO EMAIL SERVER(S), CLIENT SERVER(S), CLIENT SOFTWARE, ETC.
222

FIG. 2

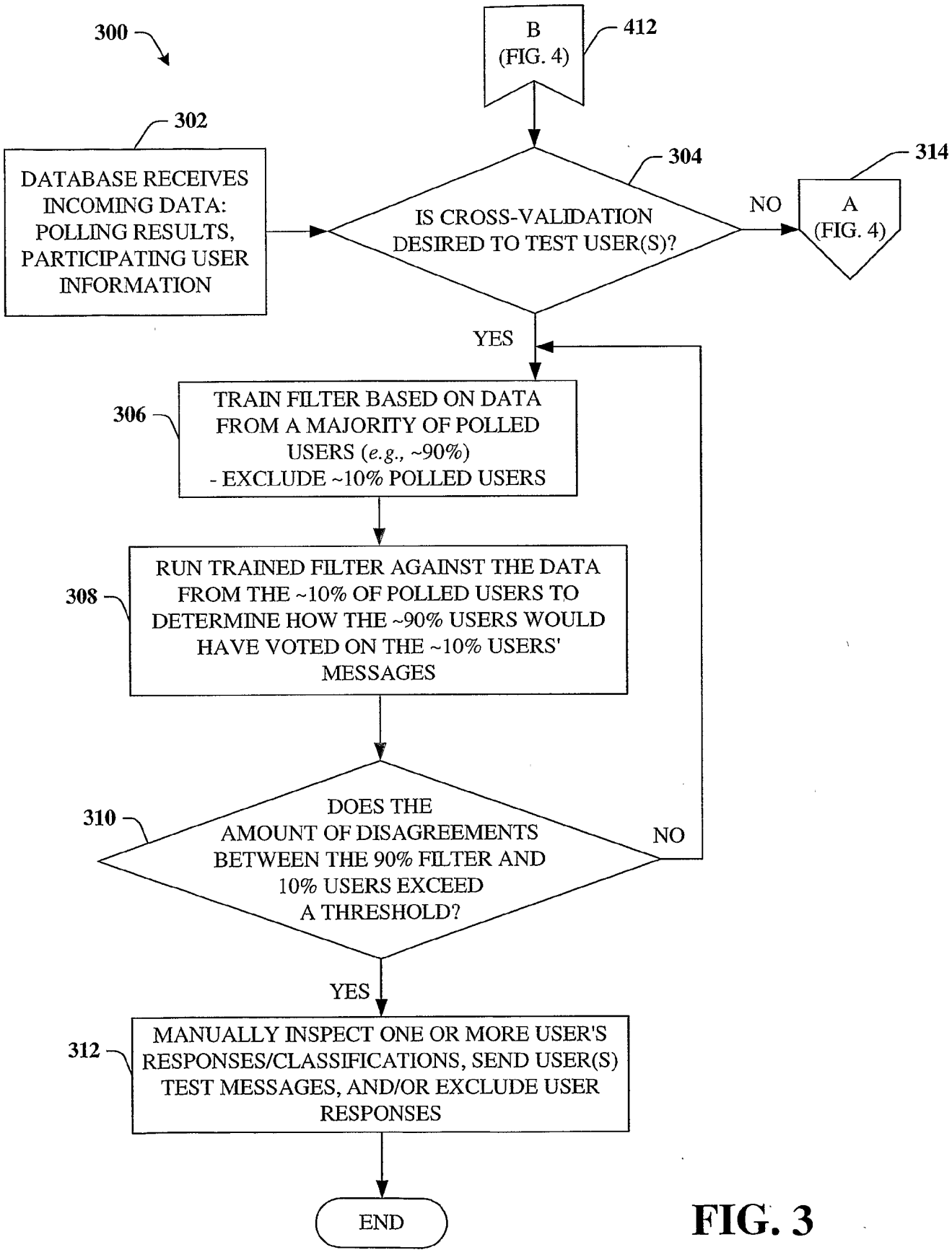

300
B
(FIG. 4)
412
302
DATABASE RECEIVES INCOMING DATA: POLLING RESULTS, PARTICIPATING USER INFORMATION
304
IS CROSS-VALIDATION DESIRED TO TEST USER(S)?
NO
314
A
(FIG. 4)
YES
306
TRAIN FILTER BASED ON DATA FROM A MAJORITY OF POLLED USERS (e.g., ~90%)
- EXCLUDE ~10% POLLED USERS
308
RUN TRAINED FILTER AGAINST THE DATA FROM THE ~10% OF POLLED USERS TO DETERMINE HOW THE ~90% USERS WOULD HAVE VOTED ON THE ~10% USERS' MESSAGES
310
DOES THE AMOUNT OF DISAGREEMENTS BETWEEN THE 90% FILTER AND 10% USERS EXCEED A THRESHOLD?
NO
YES
312
MANUALLY INSPECT ONE OR MORE USER'S RESPONSES/CLASSIFICATIONS, SEND USER(S) TEST MESSAGES, AND/OR EXCLUDE USER RESPONSES
END

FIG. 3

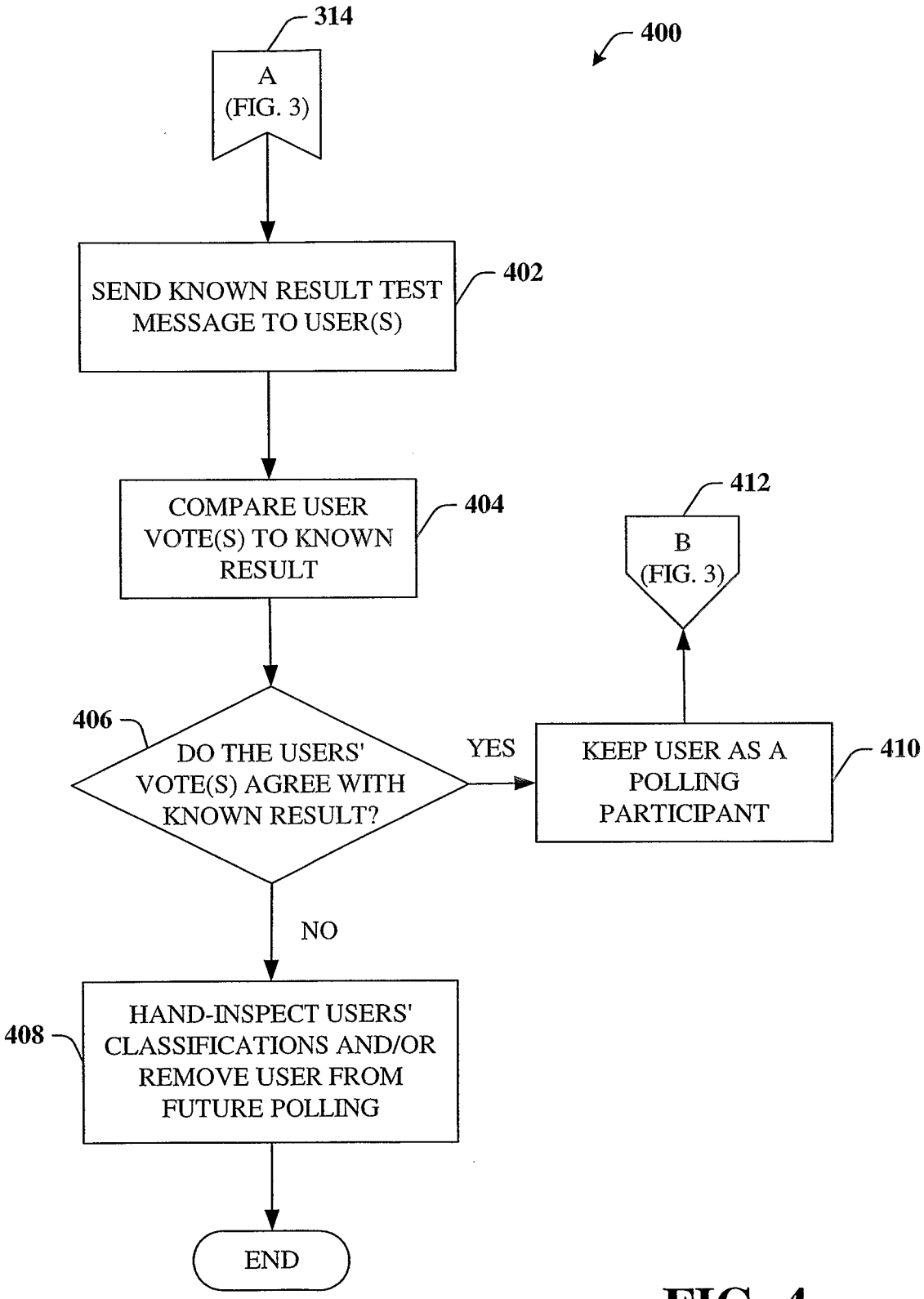

314
A
(FIG. 3)
400
SEND KNOWN RESULT TEST MESSAGE TO USER(S)
402
COMPARE USER VOTE(S) TO KNOWN RESULT
404
412
B
(FIG. 3)
406
DO THE USERS' VOTE(S) AGREE WITH KNOWN RESULT?
YES
KEEP USER AS A POLLING PARTICIPANT
410
NO
HAND-INSPECT USERS' CLASSIFICATIONS AND/OR REMOVE USER FROM FUTURE POLLING
408
END

FIG. 4

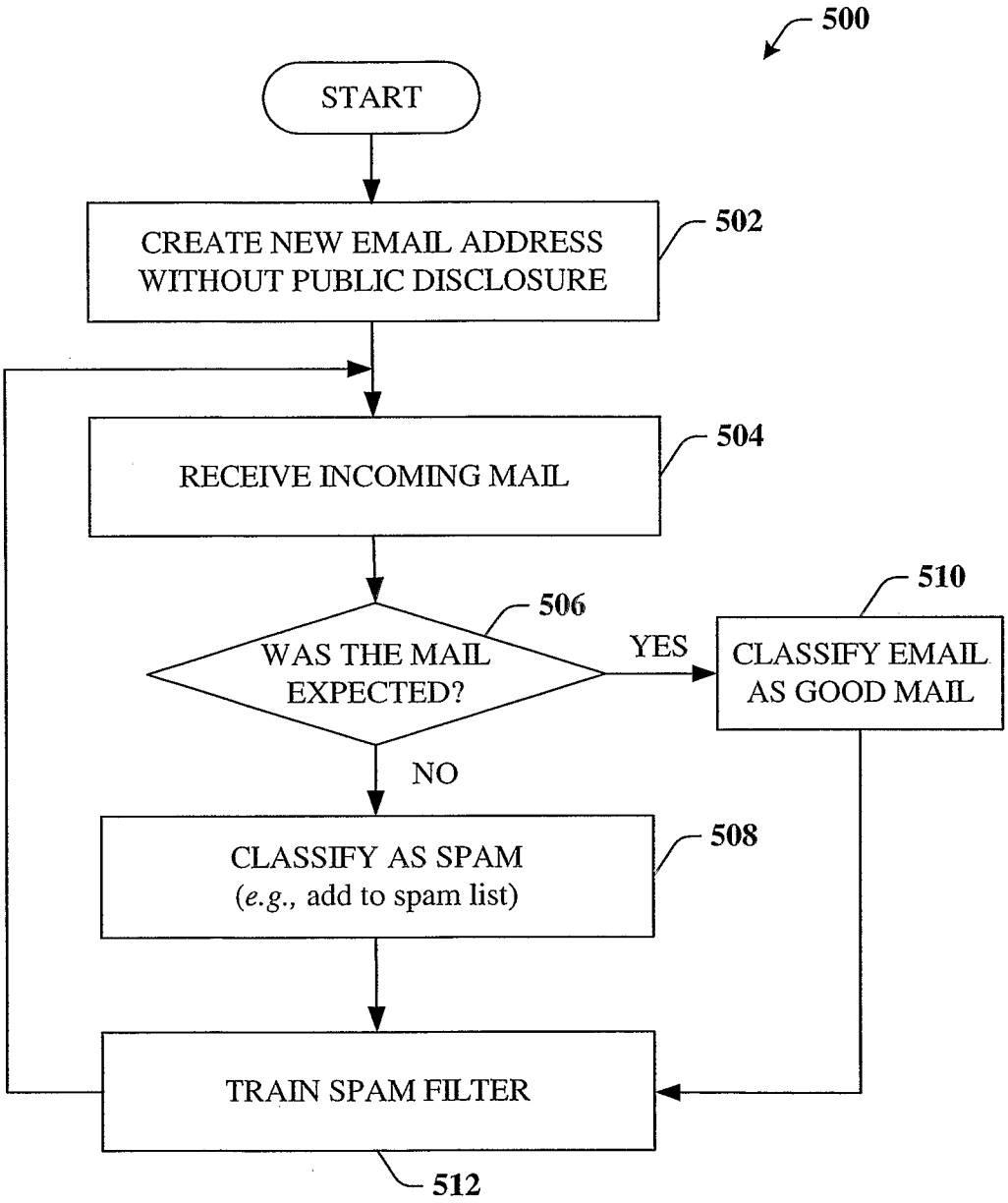

500
START
CREATE NEW EMAIL ADDRESS WITHOUT PUBLIC DISCLOSURE
502
RECEIVE INCOMING MAIL
504
WAS THE MAIL EXPECTED?
506
YES
CLASSIFY EMAIL AS GOOD MAIL
510
NO
CLASSIFY AS SPAM (e.g., add to spam list)
508
TRAIN SPAM FILTER
512

FIG. 5

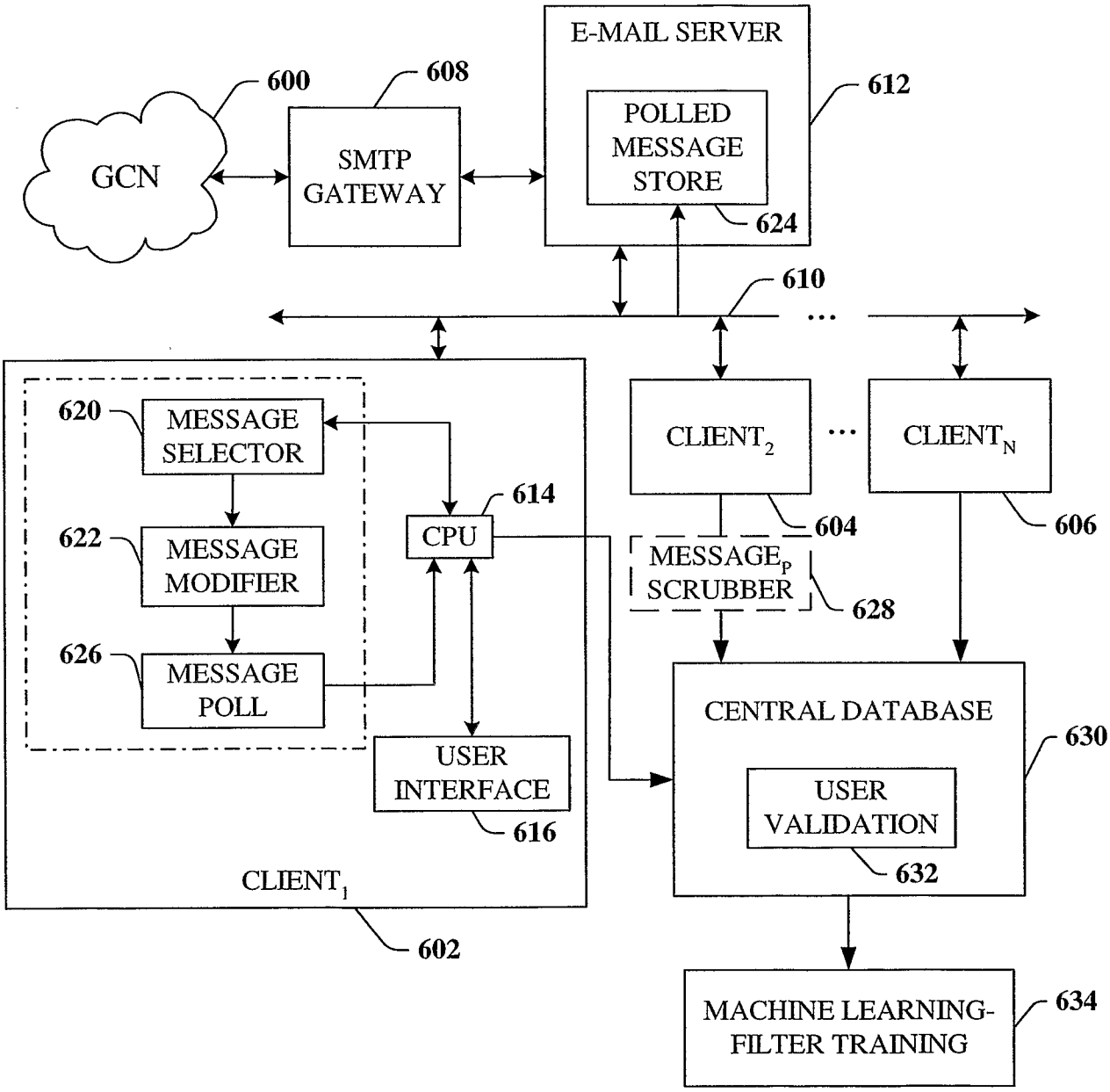

E-MAIL SERVER
600
608
612
GCN
SMTP GATEWAY
POLLED MESSAGE STORE
624
610
620
MESSAGE SELECTOR
622
MESSAGE MODIFIER
626
MESSAGE POLL
614
CPU
USER INTERFACE
616
CLIENT1
602
CLIENT2
CLIENTN
604
606
MESSAGEP SCRUBBER
628
CENTRAL DATABASE
630
USER VALIDATION
632
MACHINE LEARNING-FILTER TRAINING
634

FIG. 6

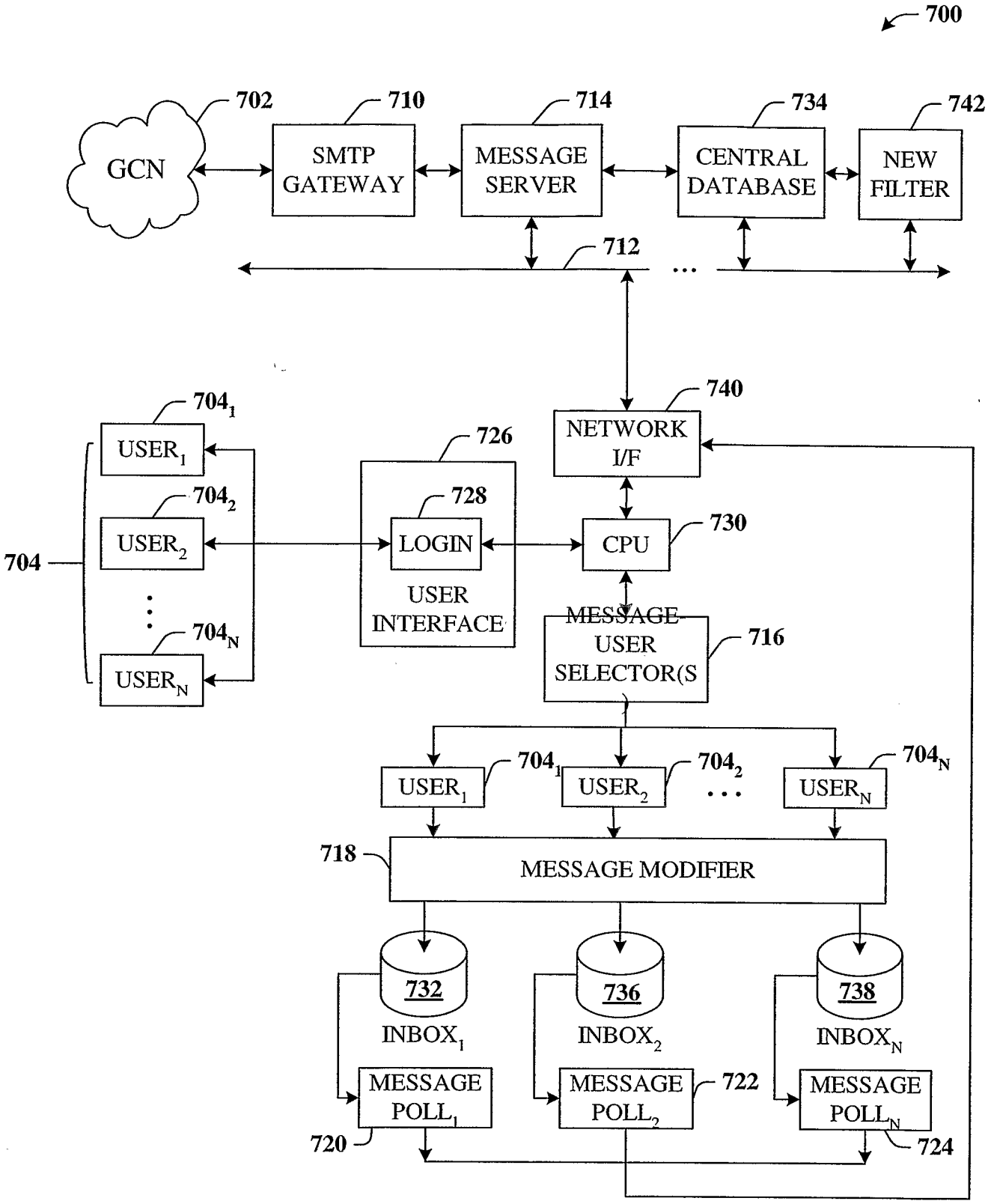

700
GCN
702
SMTP GATEWAY
710
MESSAGE SERVER
714
CENTRAL DATABASE
734
NEW FILTER
742
712
NETWORK I/F
740
704
USER1
USER2
USERN
704N
LOGIN
728
USER INTERFACE
726
CPU
730
MESSAGE USER SELECTOR(S
716
USER1
USER2
USERN
704N
718
MESSAGE MODIFIER
732
736
738
INBOX1
INBOX2
INBOXN
MESSAGE POLL1
MESSAGE POLL2
MESSAGE POLLN
722
720
724

FIG. 7

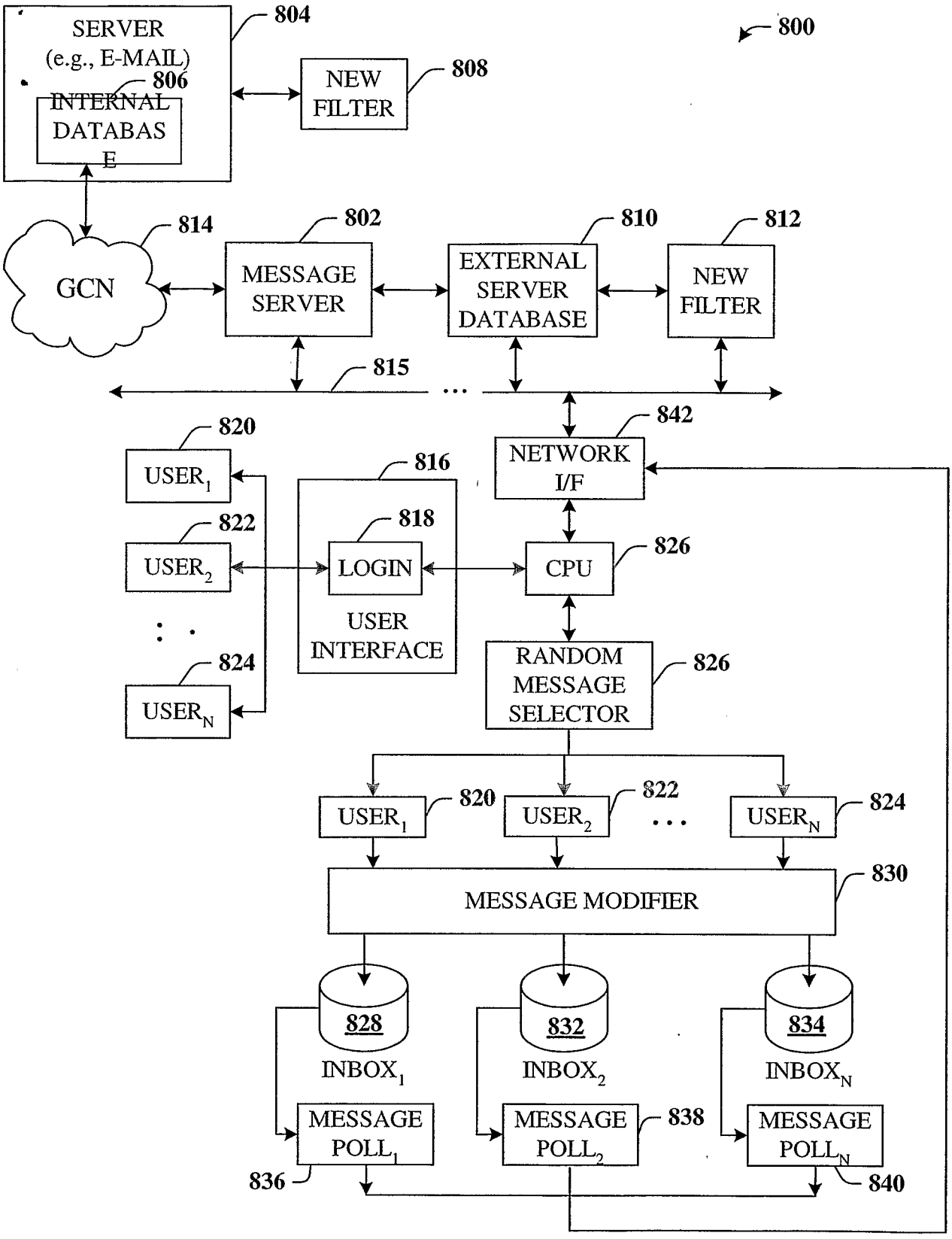

SERVER
(e.g., E-MAIL)
804
800
806
INTERNAL
DATABAS
E
NEW
FILTER
808
814
802
810
812
GCN
MESSAGE
SERVER
EXTERNAL
SERVER
DATABASE
NEW
FILTER
815
842
820
816
NETWORK
I/F
USER1
822
818
826
USER2
LOGIN
CPU
USER
INTERFACE
824
RANDOM
MESSAGE
SELECTOR
826
USERN
820
822
824
830
MESSAGE MODIFIER
828
832
834
INBOX1
INBOX2
INBOXN
MESSAGE
POLL1
MESSAGE
POLL2
838
MESSAGE
POLLN
836
840

FIG. 8

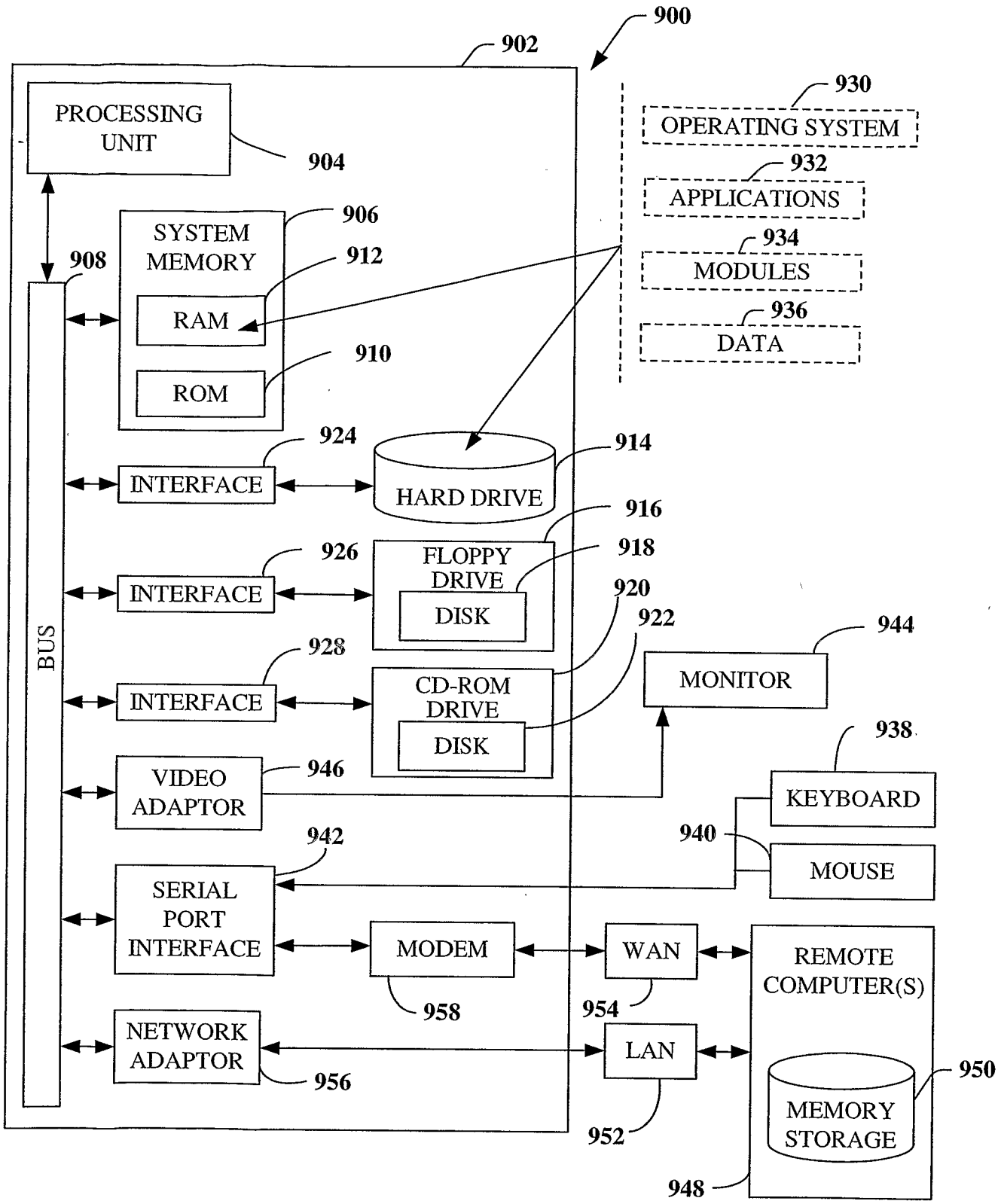

900
902
PROCESSING UNIT
904
SYSTEM MEMORY
906
908
912
RAM
910
ROM
930
OPERATING SYSTEM
932
APPLICATIONS
934
MODULES
936
DATA
924
INTERFACE
914
HARD DRIVE
916
926
FLOPPY DRIVE
918
INTERFACE
DISK
920
922
928
CD-ROM DRIVE
INTERFACE
DISK
944
MONITOR
938
946
VIDEO ADAPTOR
KEYBOARD
940
942
MOUSE
SERIAL PORT INTERFACE
MODEM
WAN
REMOTE COMPUTER(S)
958
954
NETWORK ADAPTOR
LAN
950
MEMORY STORAGE
956
952
948
BUS

FIG. 9

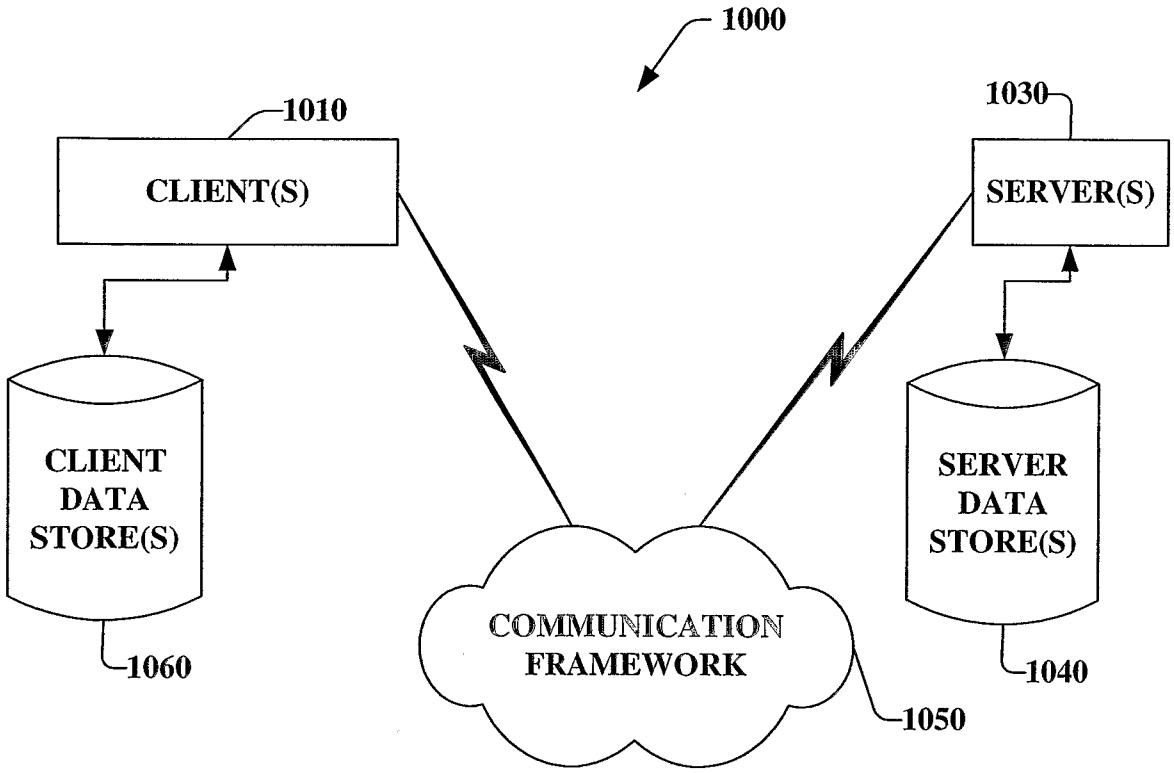

1000
1010
CLIENT(S)
1030
SERVER(S)
CLIENT DATA STORE(S)
SERVER DATA STORE(S)
COMMUNICATION FRAMEWORK
1060
1040
1050

FIG. 10