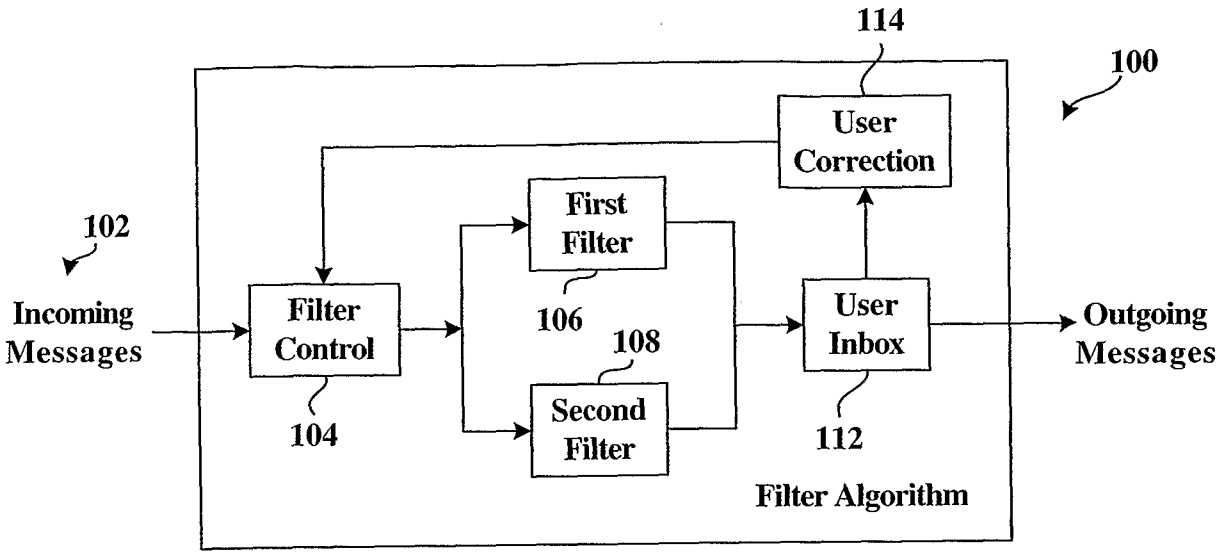

114
100
User Correction
102
Incoming Messages
Filter Control
First Filter
106
108
Second Filter
104
User Inbox
112
Outgoing Messages
Filter Algorithm

FIG. 1

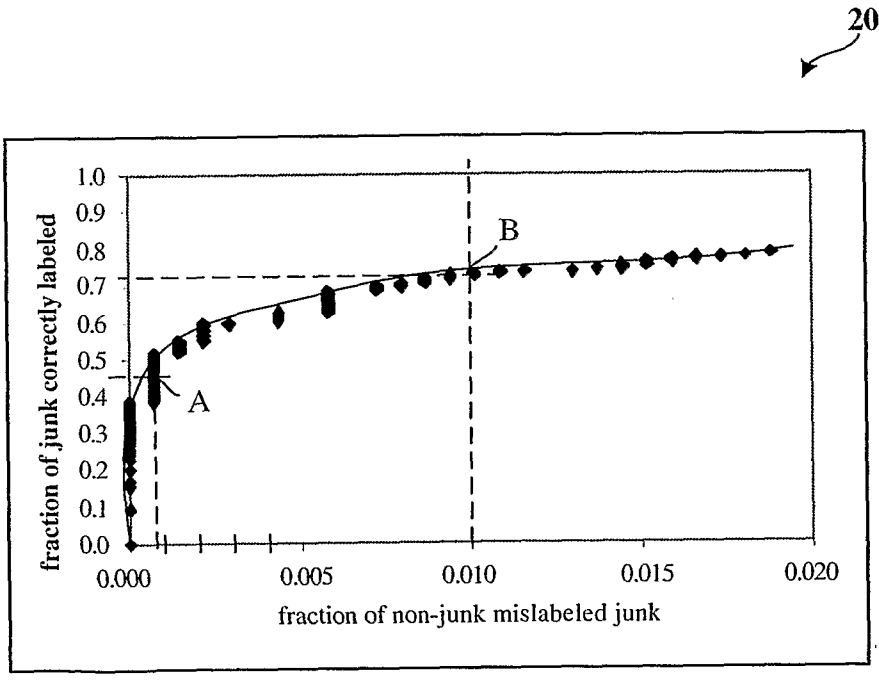

200
fraction of junk correctly labeled
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
A
B
0.000
0.005
0.010
0.015
0.020
fraction of non-junk mislabeled junk

FIG. 2

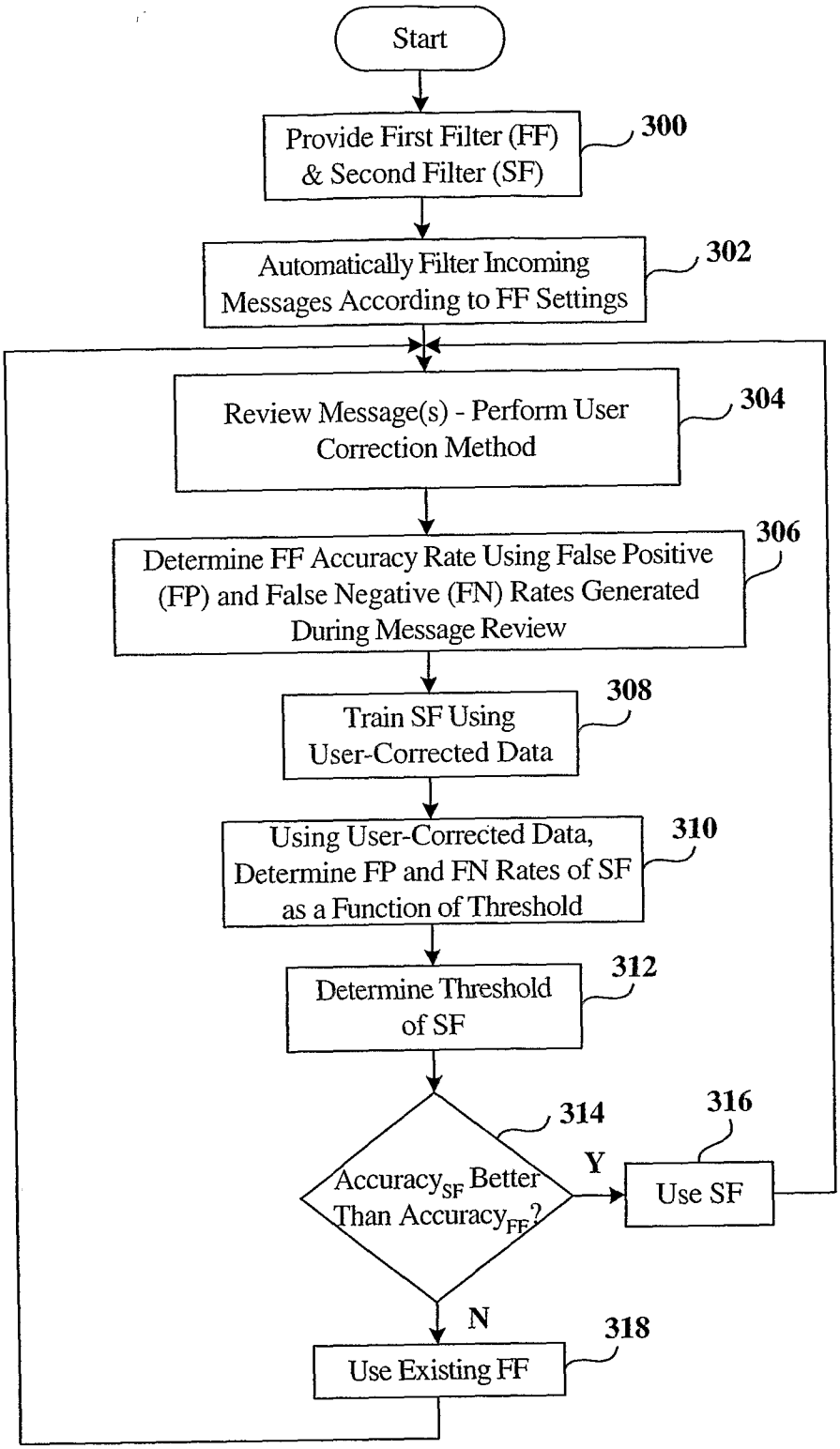

Start
Provide First Filter (FF) & Second Filter (SF)
300
Automatically Filter Incoming Messages According to FF Settings
302
Review Message(s) - Perform User Correction Method
304
Determine FF Accuracy Rate Using False Positive (FP) and False Negative (FN) Rates Generated During Message Review
306
Train SF Using User-Corrected Data
308
Using User-Corrected Data, Determine FP and FN Rates of SF as a Function of Threshold
310
Determine Threshold of SF
312
Accuracy$_{SF}$ Better Than Accuracy$_{FF}$?
314
Y
316
Use SF
N
Use Existing FF
318

FIG. 3

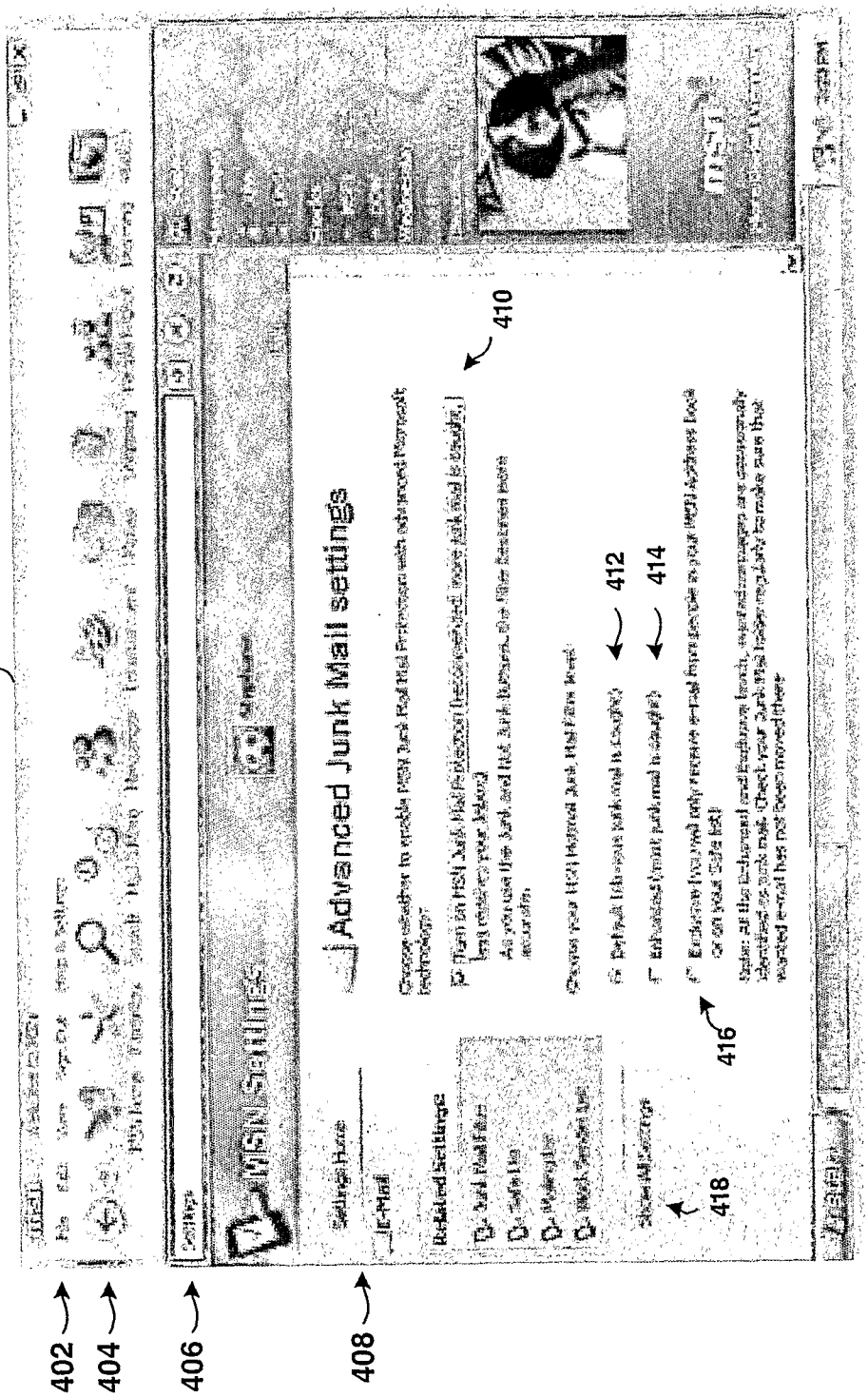

400
401
402
404
406
408
410
412
414
416
418
Advanced Junk Mail settings

FIG. 4a

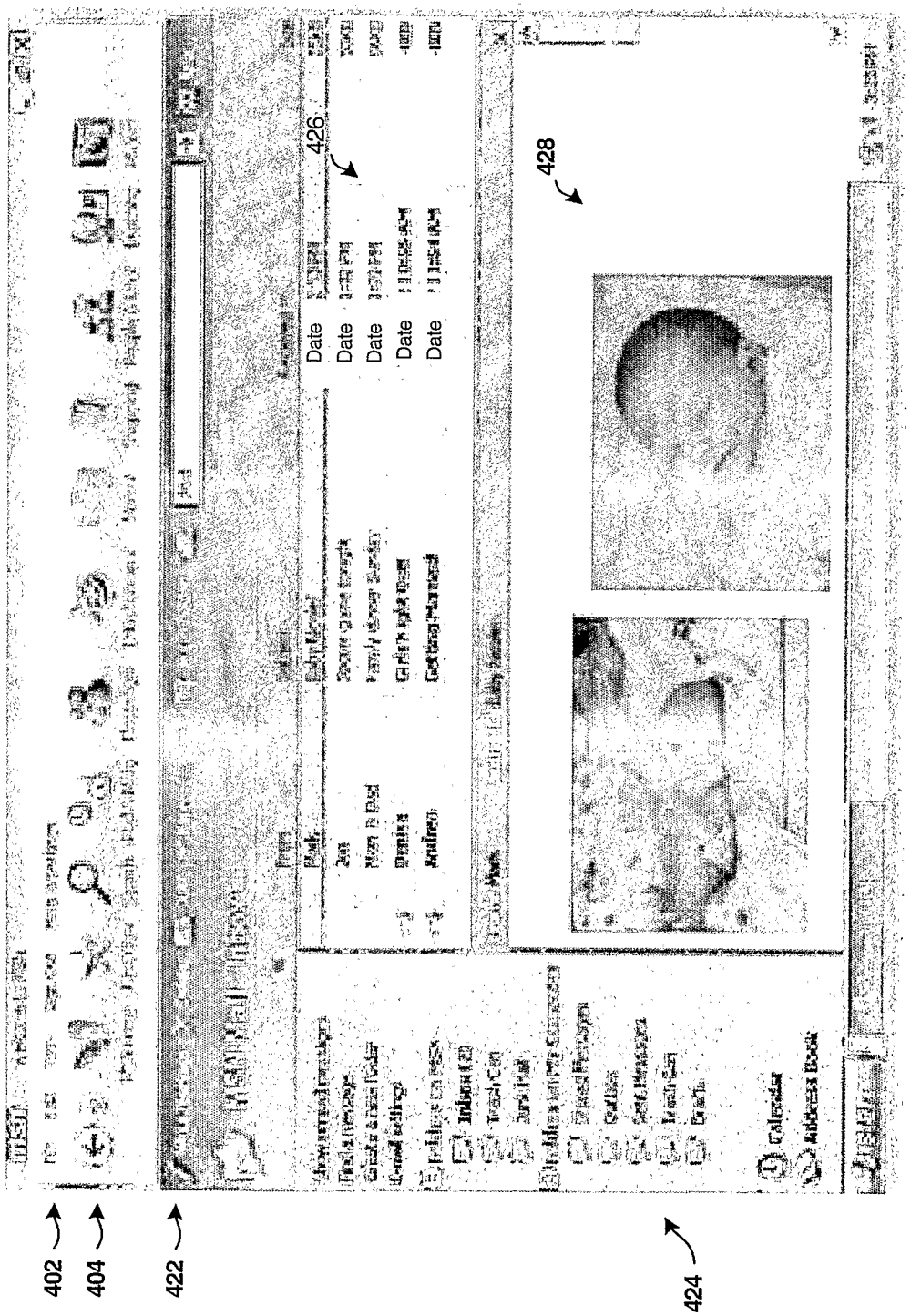


FIG. 4b

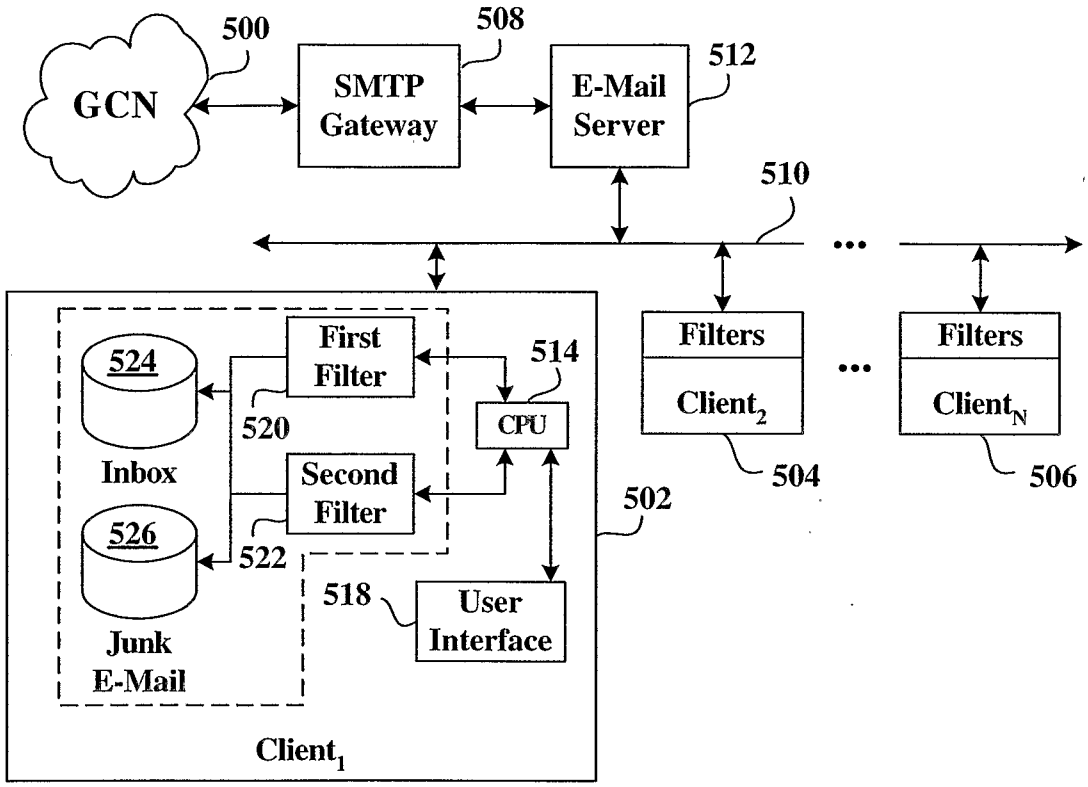

GCN
500
SMTP Gateway
508
E-Mail Server
512
510
Filters
Client2
504
Filters
ClientN
506
First Filter
514
CPU
524
Inbox
520
Second Filter
526
Junk E-Mail
522
502
518
User Interface
Client1

FIG. 5

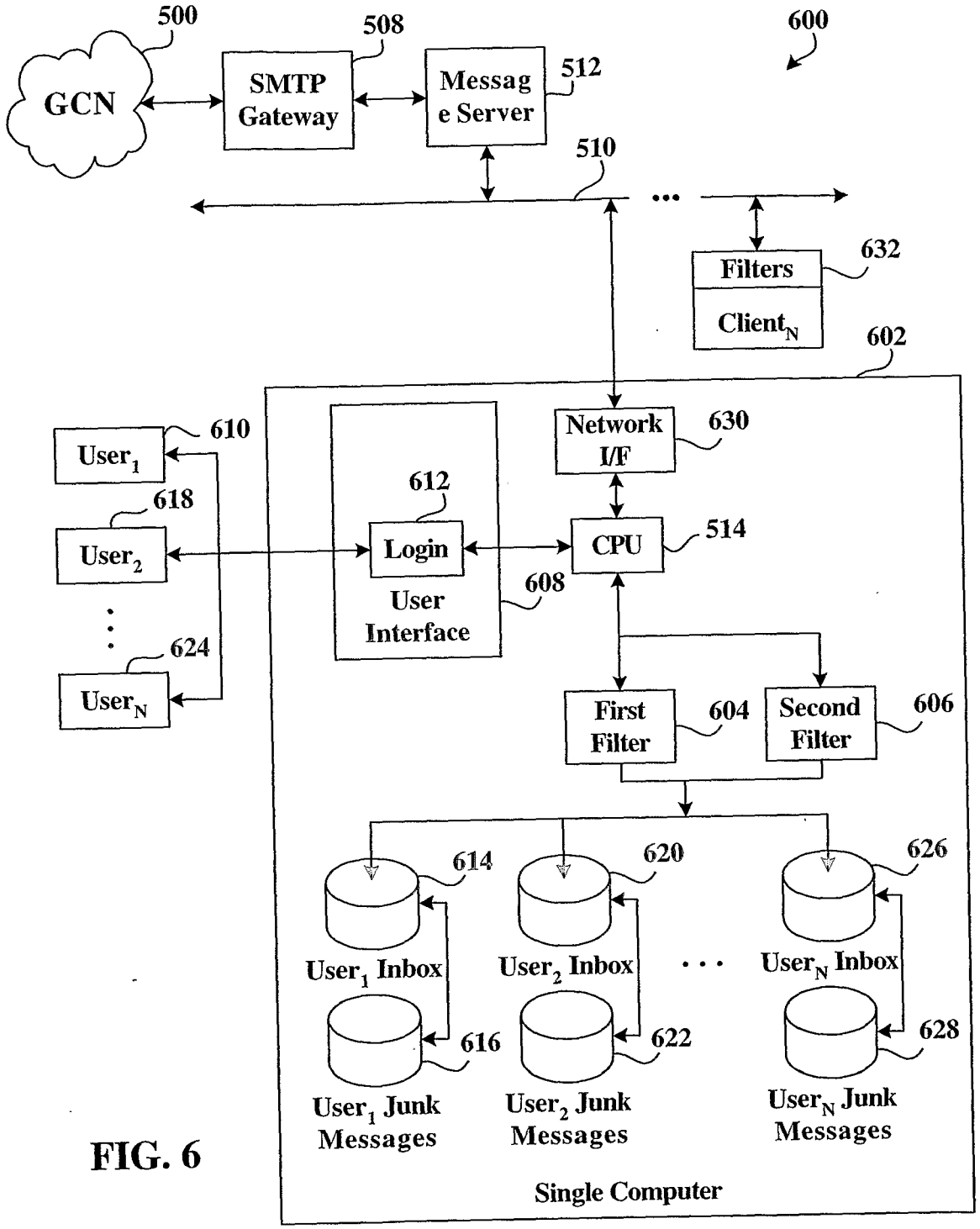

500
GCN
508
SMTP Gateway
512
Messag e Server
600
510
632
Filters
Client$_N$
602
610
User$_1$
618
User$_2$
624
User$_N$
612
Login
User Interface
608
Network I/F
630
CPU
514
First Filter
604
Second Filter
606
614
620
626
User$_1$ Inbox
User$_2$ Inbox
User$_N$ Inbox
616
622
628
User$_1$ Junk Messages
User$_2$ Junk Messages
User$_N$ Junk Messages
Single Computer

FIG. 6

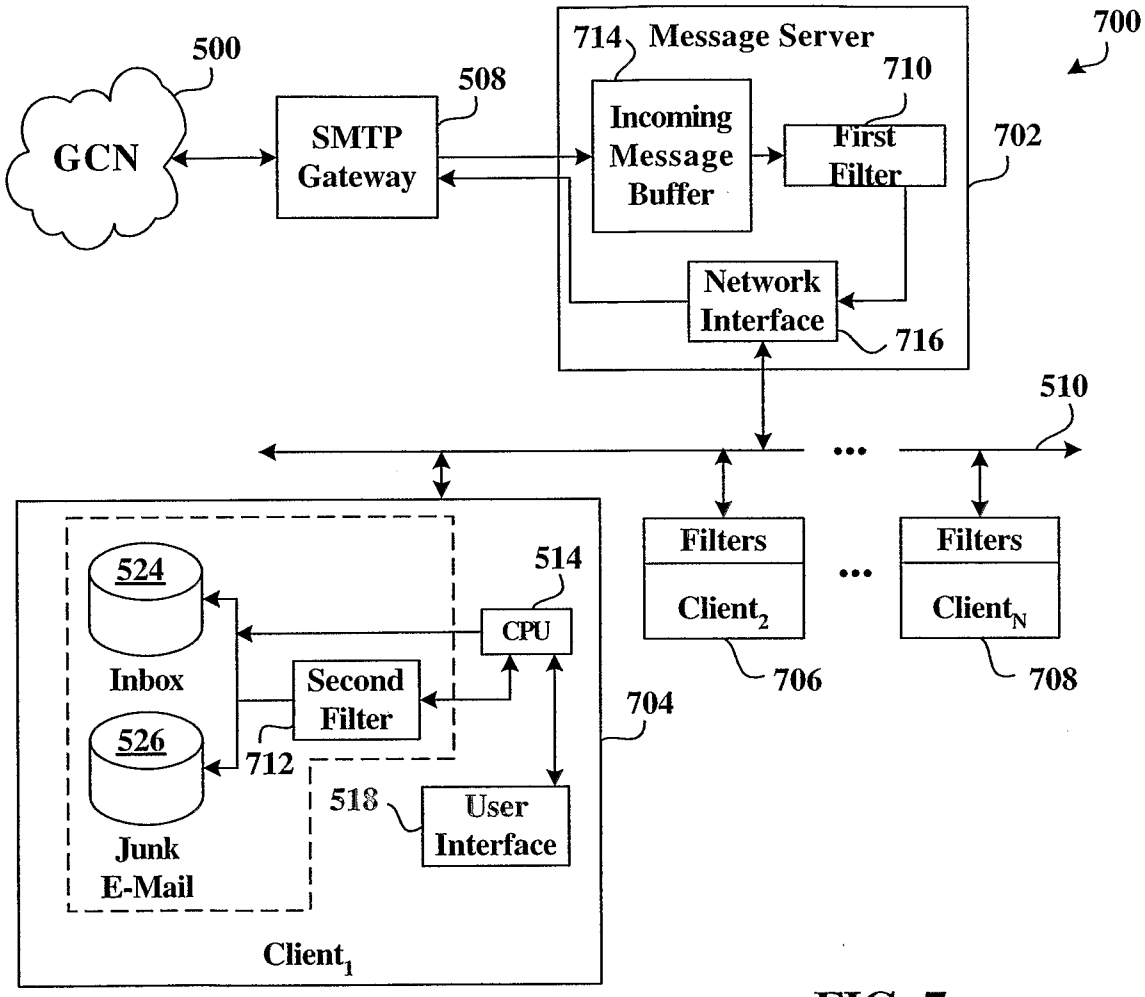

700
500
GCN
508
SMTP Gateway
714
Message Server
710
Incoming Message Buffer
First Filter
702
Network Interface
716
510
524
Inbox
514
CPU
Second Filter
526
Junk E-Mail
712
518
User Interface
704
Client1
Filters
Client2
706
Filters
ClientN
708

FIG. 7

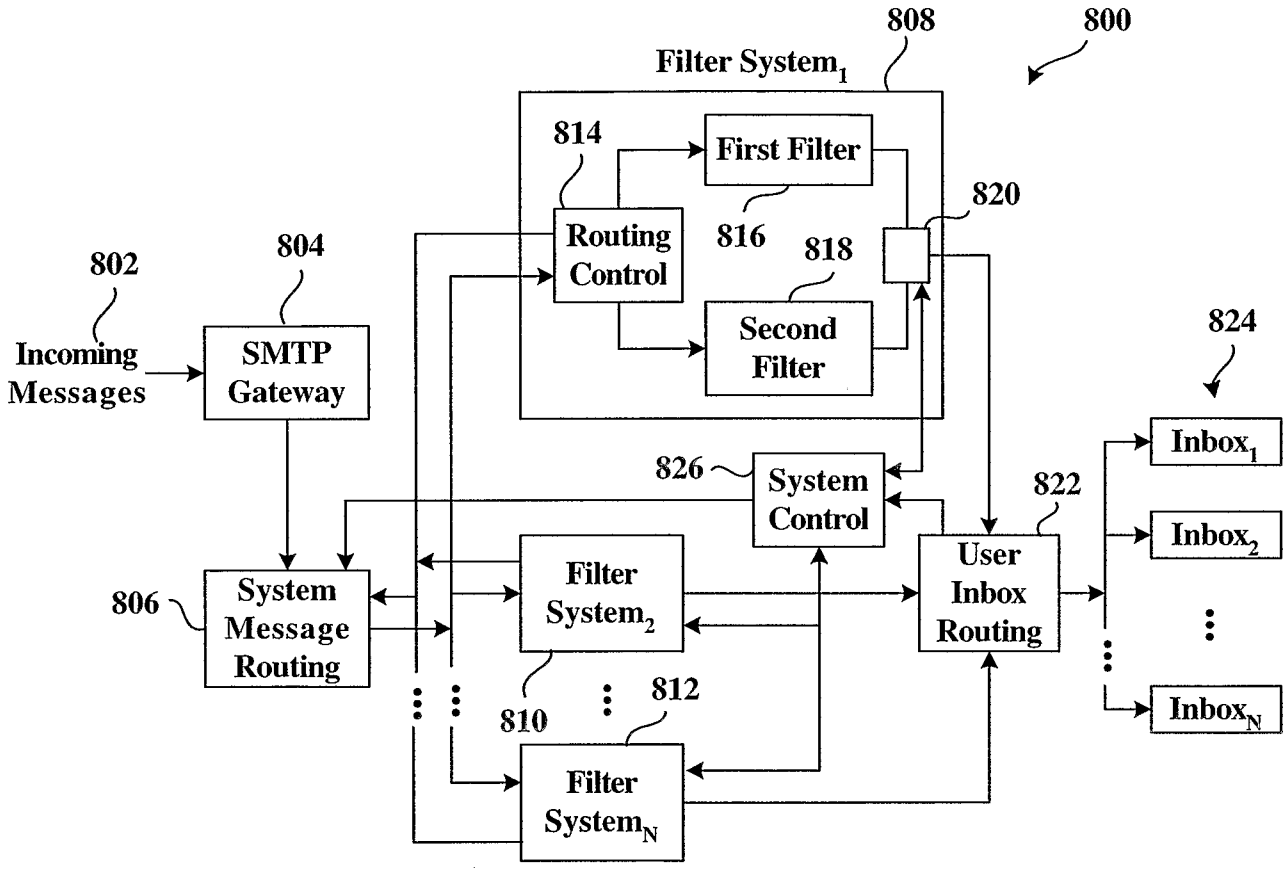

808
800
Filter System$_1$
814
First Filter
820
816
Routing Control
818
802
804
Second Filter
824
Incoming Messages
SMTP Gateway
826
System Control
822
Inbox$_1$
Inbox$_2$
806
System Message Routing
Filter System$_2$
User Inbox Routing
Inbox$_N$
810
812
Filter System$_N$

FIG. 8

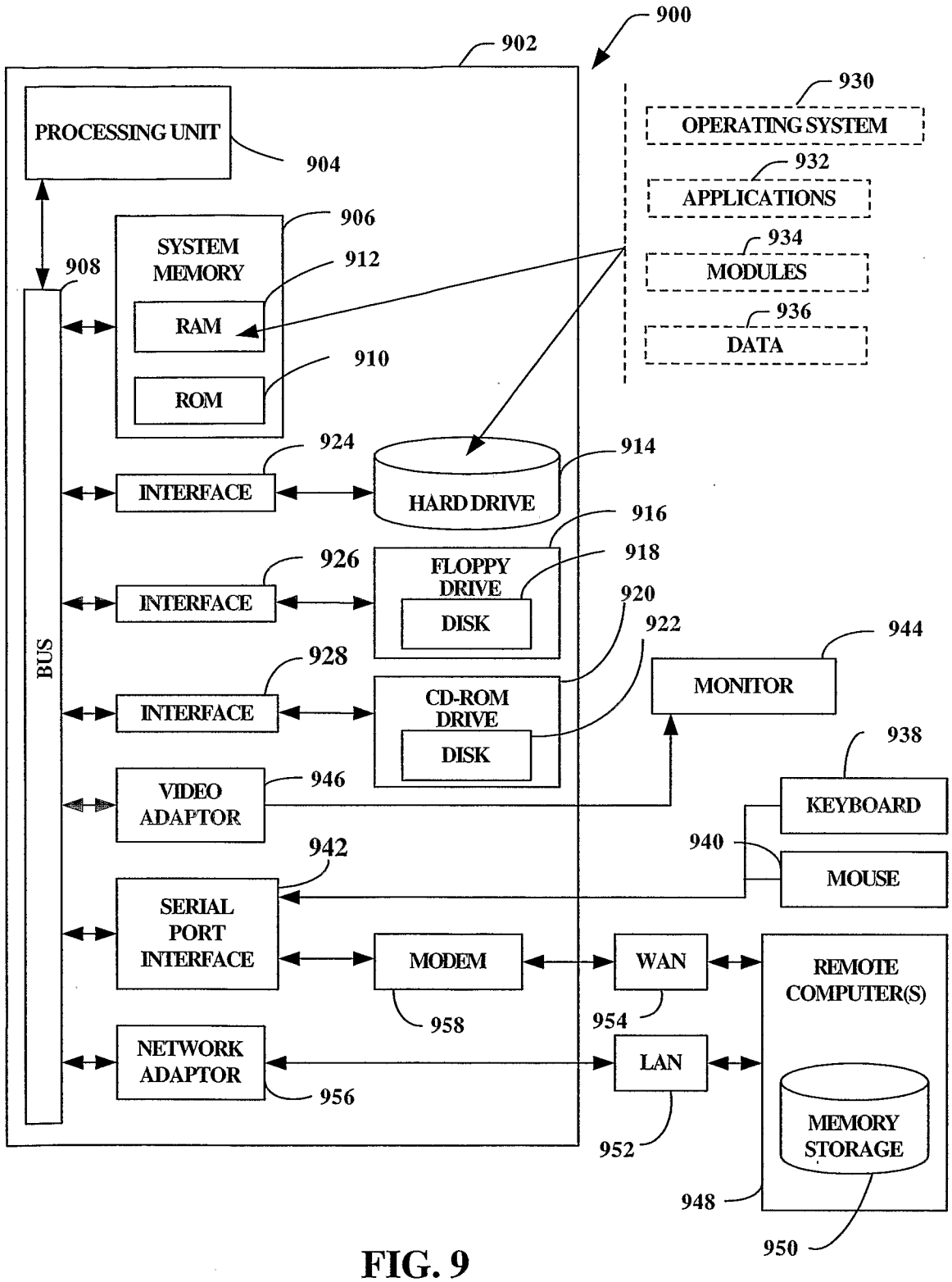

900
902
PROCESSING UNIT
904
SYSTEM MEMORY
906
908
912
RAM
910
ROM
930
OPERATING SYSTEM
932
APPLICATIONS
934
MODULES
936
DATA
924
INTERFACE
914
HARD DRIVE
916
926
INTERFACE
FLOPPY DRIVE
918
DISK
920
922
928
INTERFACE
CD-ROM DRIVE
DISK
944
MONITOR
938
946
VIDEO ADAPTOR
KEYBOARD
940
MOUSE
942
SERIAL PORT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

FIG. 9