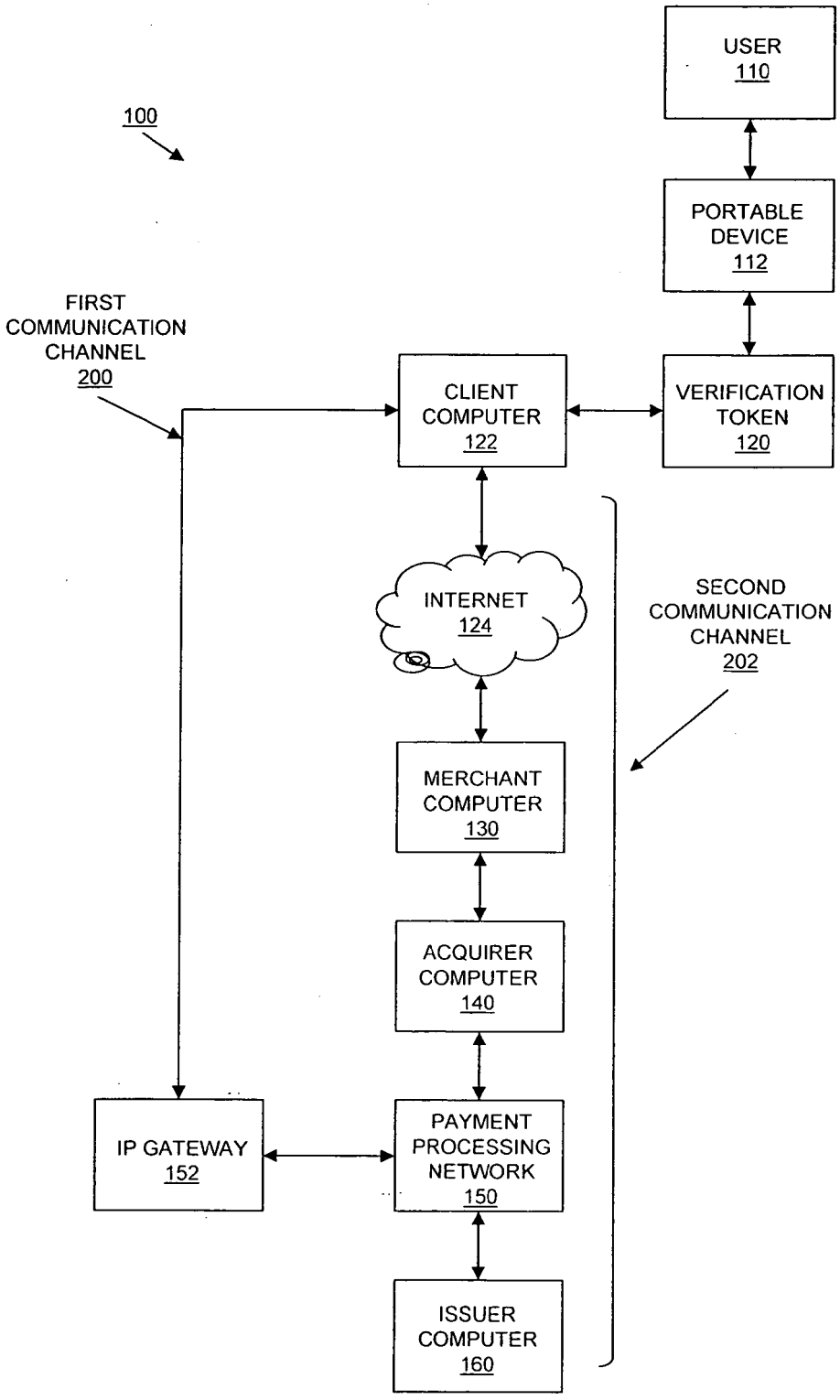

USER
110
100
PORTABLE
DEVICE
112
FIRST
COMMUNICATION
CHANNEL
200
CLIENT
COMPUTER
122
VERIFICATION
TOKEN
120
INTERNET
124
SECOND
COMMUNICATION
CHANNEL
202
MERCHANT
COMPUTER
130
ACQUIRER
COMPUTER
140
IP GATEWAY
152
PAYMENT
PROCESSING
NETWORK
150
ISSUER
COMPUTER
160

FIG. 1

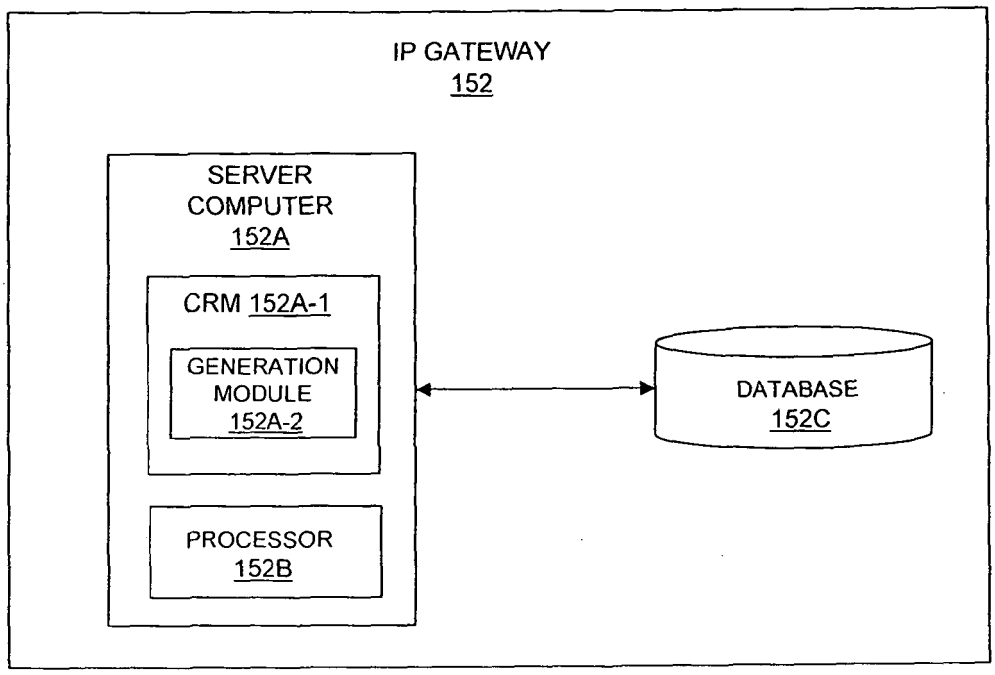

IP GATEWAY
152
SERVER
COMPUTER
152A
CRM 152A-1
GENERATION
MODULE
152A-2
PROCESSOR
152B
DATABASE
152C

FIG. 2a

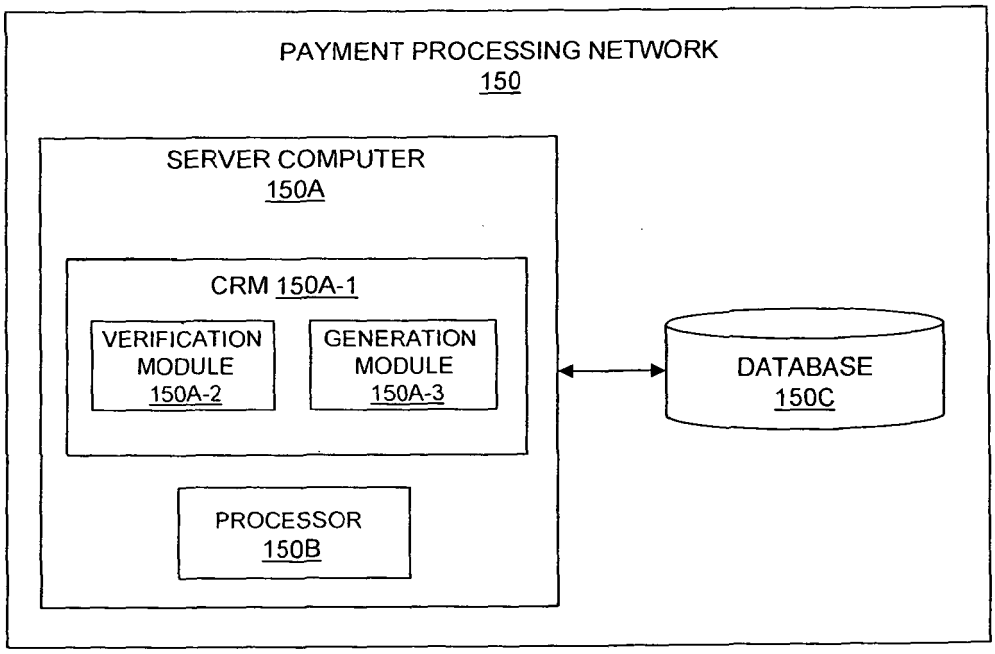

PAYMENT PROCESSING NETWORK
150
SERVER COMPUTER
150A
CRM 150A-1
VERIFICATION
MODULE
150A-2
GENERATION
MODULE
150A-3
PROCESSOR
150B
DATABASE
150C

FIG. 2b

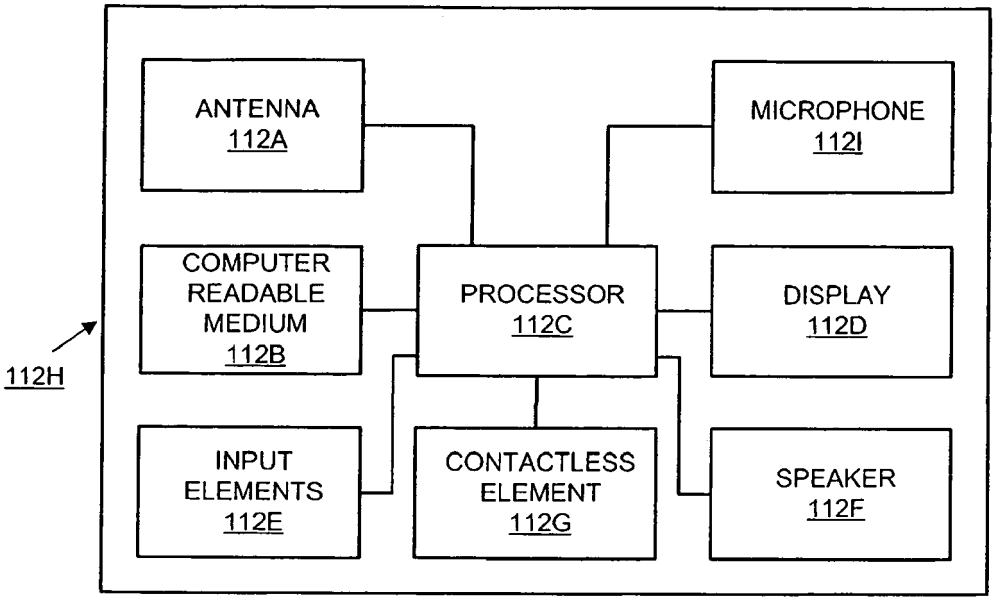

ANTENNA
112A
MICROPHONE
112I
COMPUTER
READABLE
MEDIUM
112B
PROCESSOR
112C
DISPLAY
112D
112H
INPUT
ELEMENTS
112E
CONTACTLESS
ELEMENT
112G
SPEAKER
112F

FIG. 3a

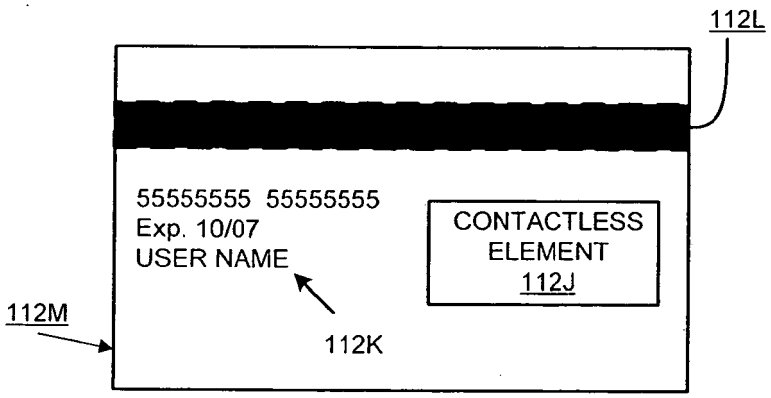

112L
55555555 55555555
Exp. 10/07
USER NAME
CONTACTLESS
ELEMENT
112J
112M
112K

FIG. 3b

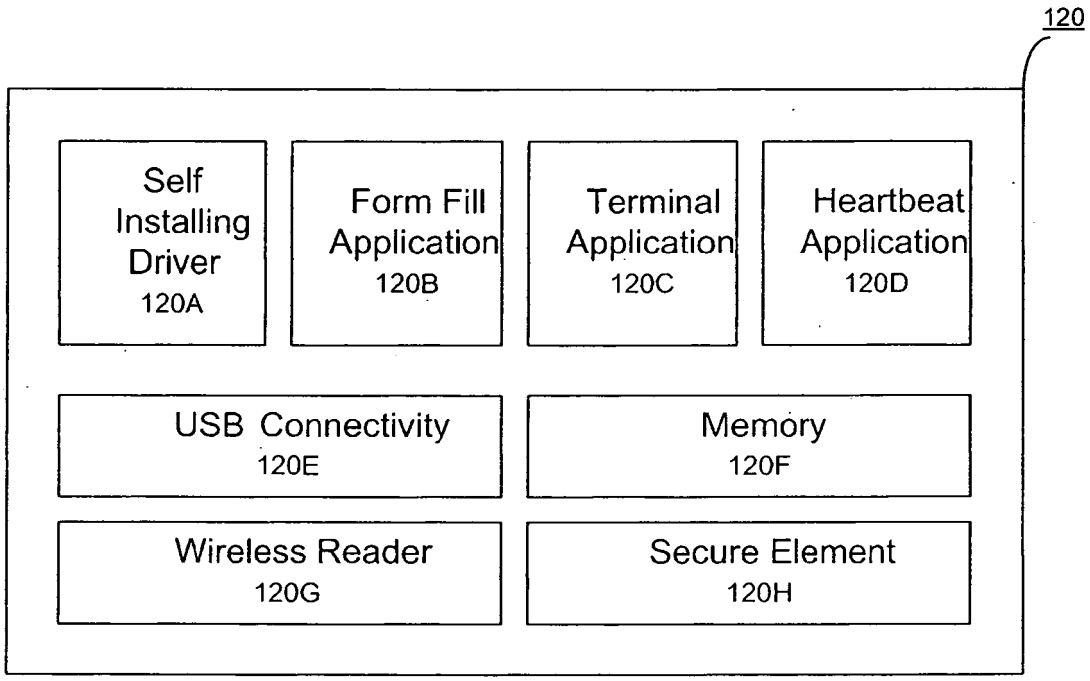

120
Self Installing Driver 120A
Form Fill Application 120B
Terminal Application 120C
Heartbeat Application 120D
USB Connectivity 120E
Memory 120F
Wireless Reader 120G
Secure Element 120H

FIG. 4

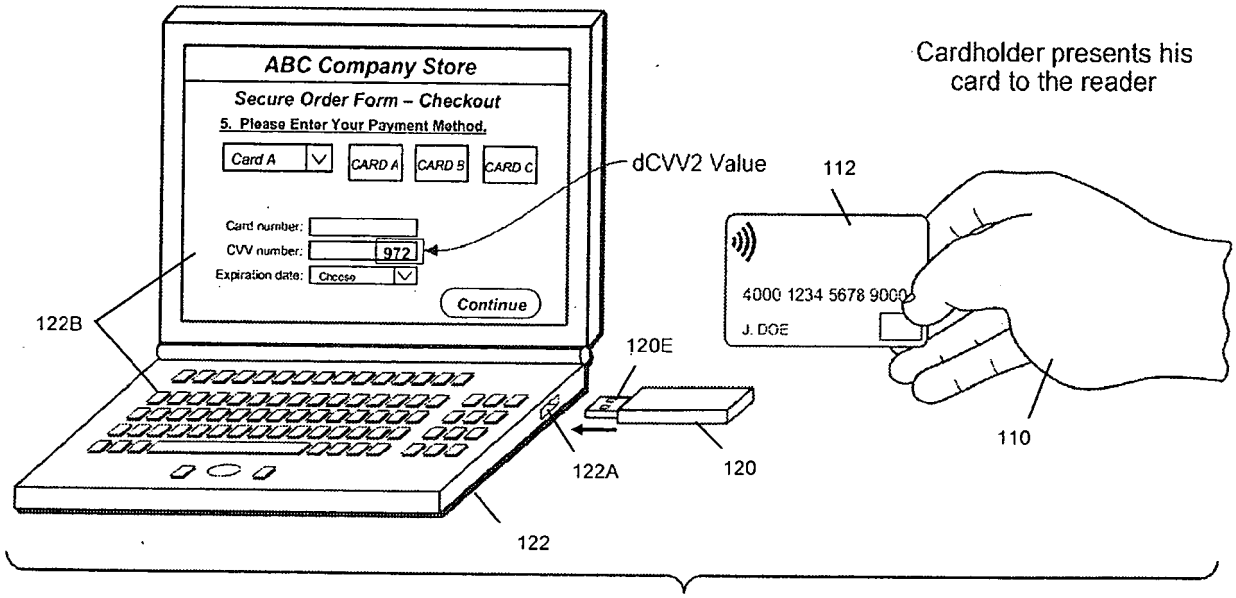

ABC Company Store
Secure Order Form – Checkout
5. Please Enter Your Payment Method.
Card A
CARD A
CARD B
CARD C
Card number:
CVV number:
972
Expiration date:
Choose
Continue
dCVV2 Value
Cardholder presents his card to the reader
112
4000 1234 5678 9000
J. DOE
122B
120E
122A
120
110
122

FIG. 5

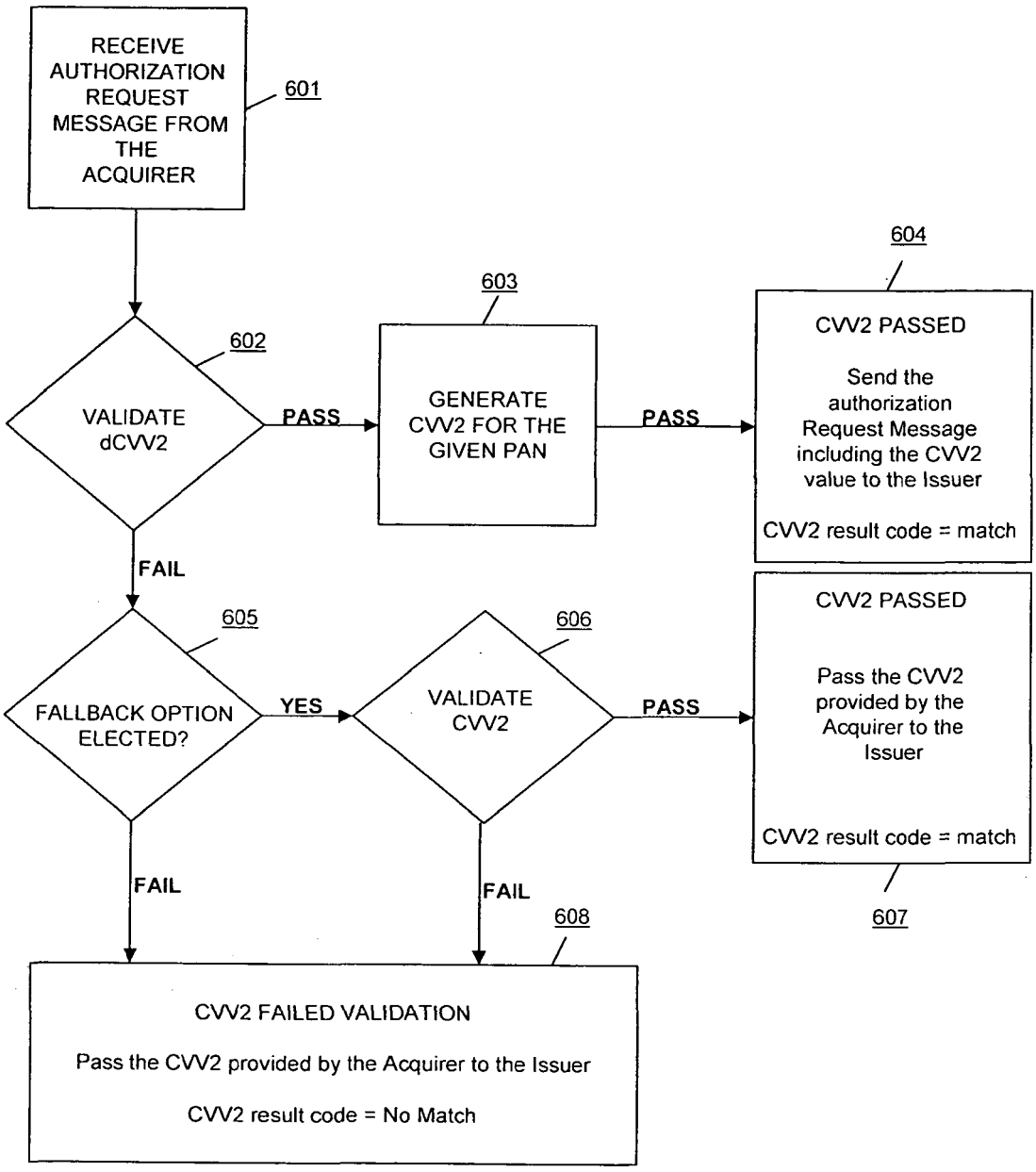

RECEIVE AUTHORIZATION REQUEST MESSAGE FROM THE ACQUIRER
601
VALIDATE dCVV2
602
PASS
GENERATE CVV2 FOR THE GIVEN PAN
603
PASS
CVV2 PASSED
Send the authorization Request Message including the CVV2 value to the Issuer
CVV2 result code = match
604
FAIL
FALLBACK OPTION ELECTED?
605
YES
VALIDATE CVV2
606
PASS
CVV2 PASSED
Pass the CVV2 provided by the Acquirer to the Issuer
CVV2 result code = match
607
FAIL
FAIL
608
CVV2 FAILED VALIDATION
Pass the CVV2 provided by the Acquirer to the Issuer
CVV2 result code = No Match

FIG. 6

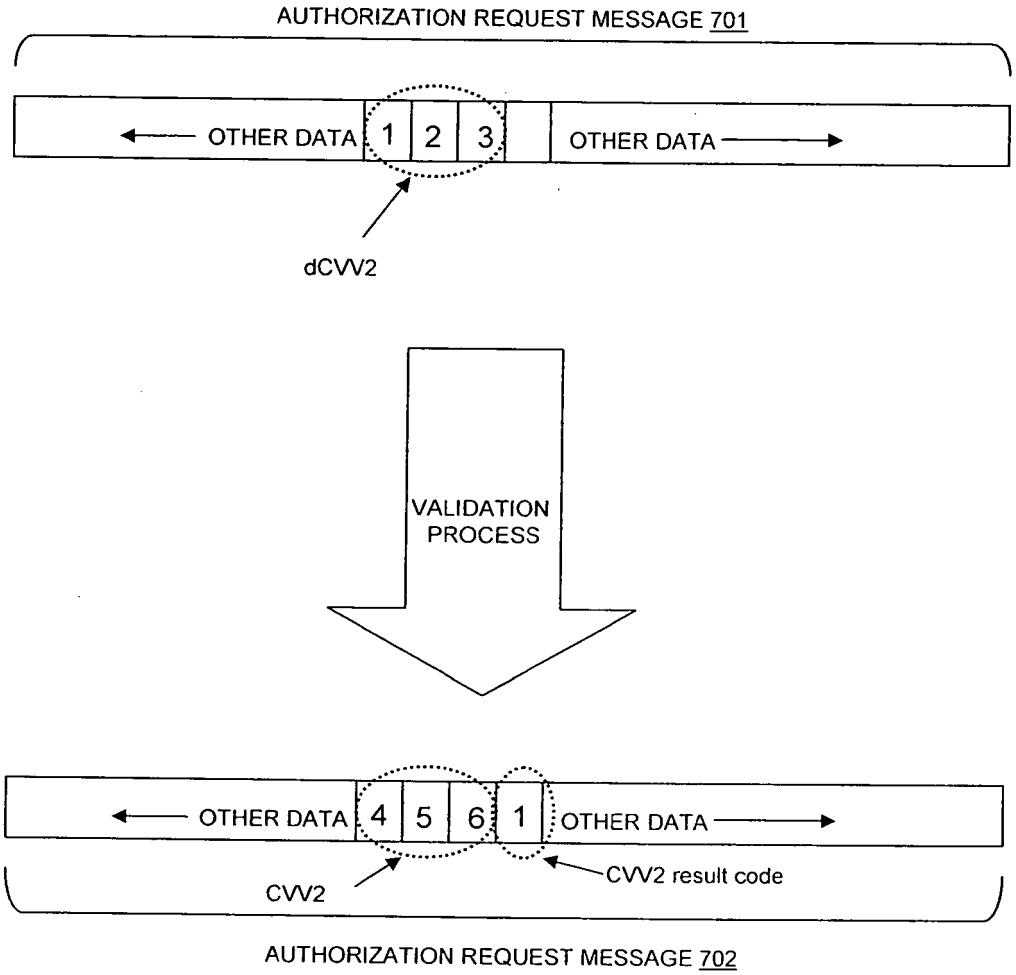

AUTHORIZATION REQUEST MESSAGE 701
OTHER DATA
1
2
3
OTHER DATA
dCVV2
VALIDATION PROCESS
OTHER DATA
4
5
6
1
OTHER DATA
CVV2
CVV2 result code
AUTHORIZATION REQUEST MESSAGE 702

FIG. 7

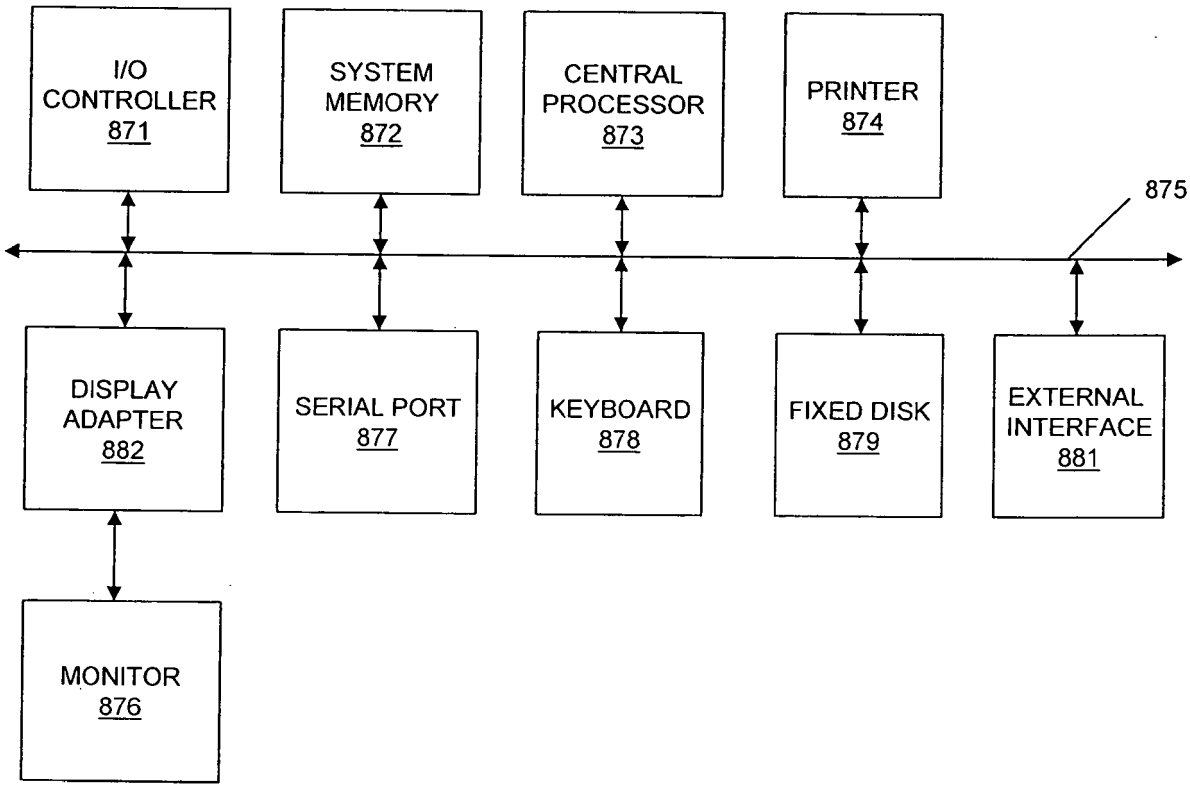

I/O CONTROLLER 871
SYSTEM MEMORY 872
CENTRAL PROCESSOR 873
PRINTER 874
875
DISPLAY ADAPTER 882
SERIAL PORT 877
KEYBOARD 878
FIXED DISK 879
EXTERNAL INTERFACE 881
MONITOR 876

FIG. 8