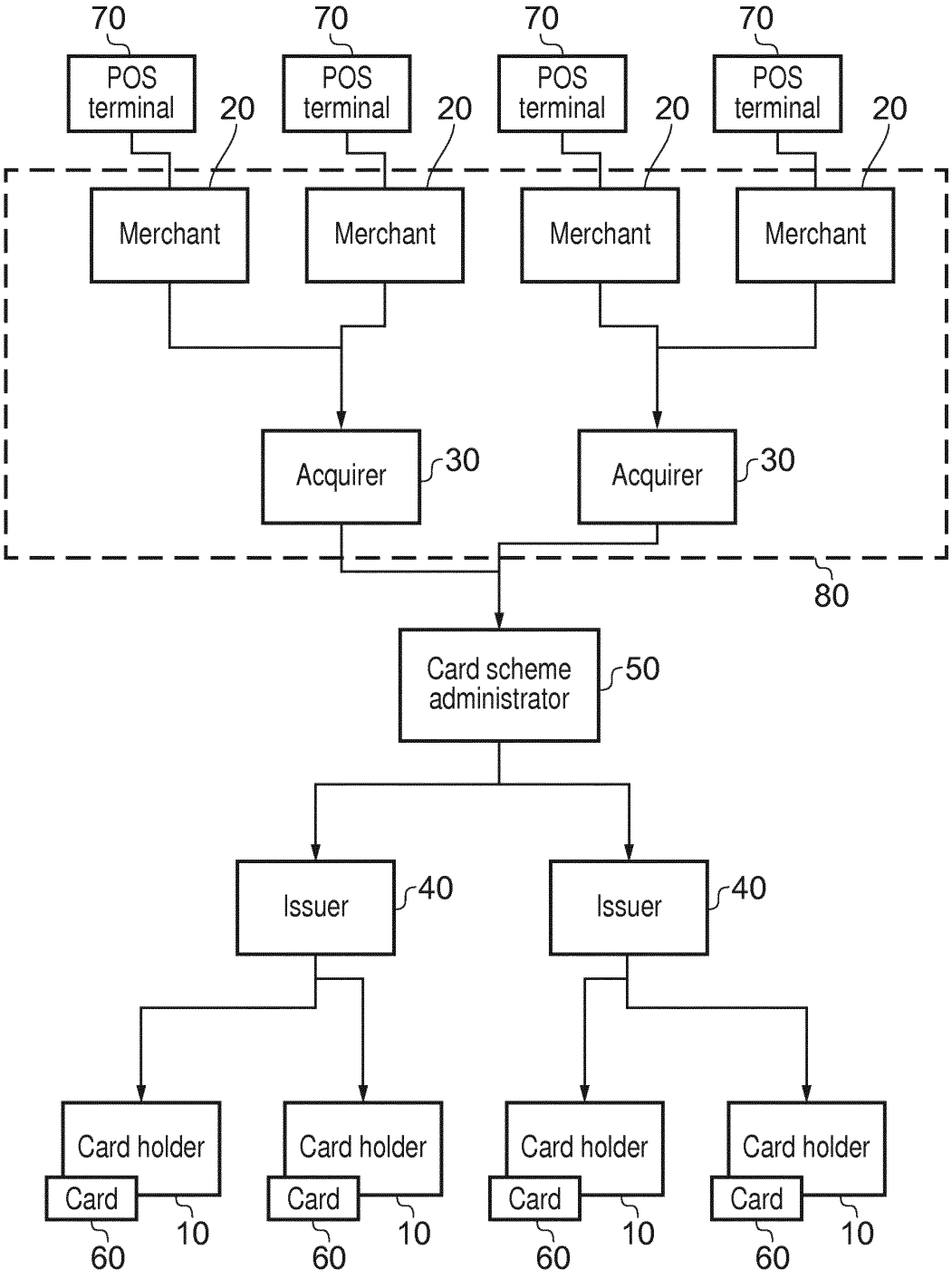

70
POS terminal
20
Merchant
Acquirer
30
80
Card scheme administrator
50
Issuer
40
Card holder
Card
10
60

FIG. 1

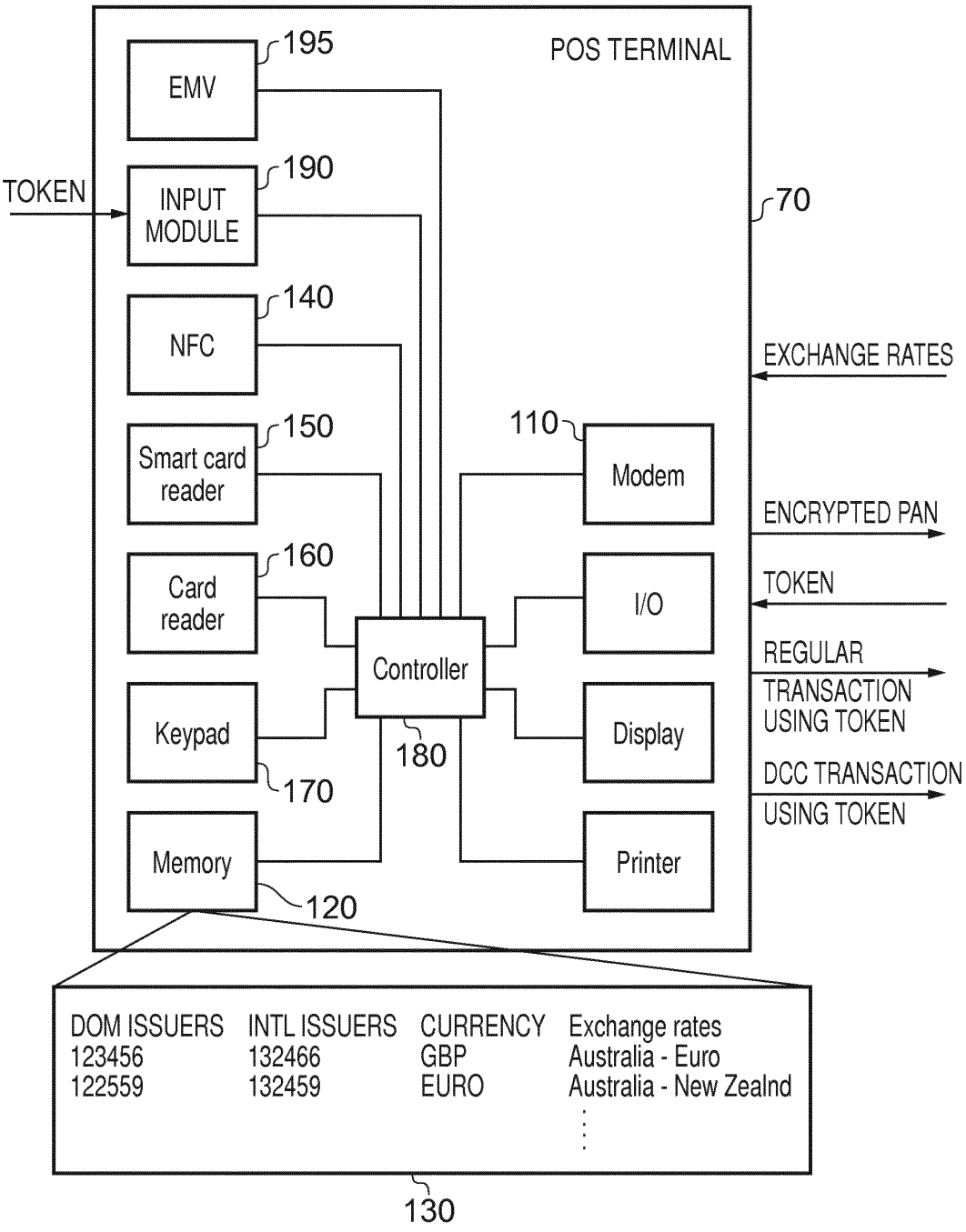

POS TERMINAL
EMV
195
TOKEN
INPUT MODULE
190
70
NFC
140
EXCHANGE RATES
Smart card reader
150
110
Modem
ENCRYPTED PAN
Card reader
160
I/O
TOKEN
Controller
REGULAR TRANSACTION USING TOKEN
Keypad
180
Display
DCC TRANSACTION USING TOKEN
170
Memory
Printer
120
DOM ISSUERS INTL ISSUERS CURRENCY Exchange rates
123456 132466 GBP Australia - Euro
122559 132459 EURO Australia - New Zealnd
130

FIG. 2

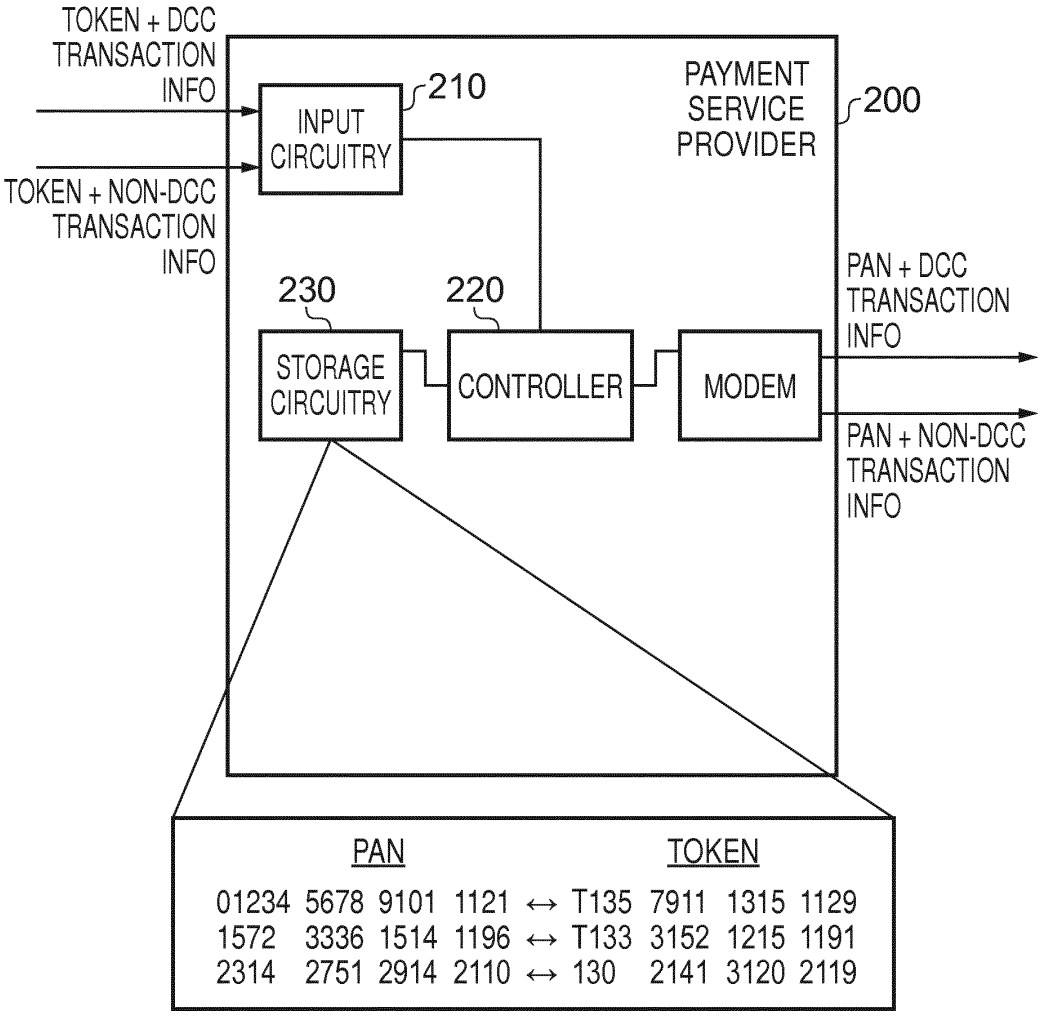

TOKEN + DCC TRANSACTION INFO
TOKEN + NON-DCC TRANSACTION INFO
INPUT CIRCUITRY
210
PAYMENT SERVICE PROVIDER
200
230
220
STORAGE CIRCUITRY
CONTROLLER
MODEM
PAN + DCC TRANSACTION INFO
PAN + NON-DCC TRANSACTION INFO
PAN
TOKEN
01234 5678 9101 1121 ↔ T135 7911 1315 1129
1572 3336 1514 1196 ↔ T133 3152 1215 1191
2314 2751 2914 2110 ↔ 130 2141 3120 2119

FIG. 3

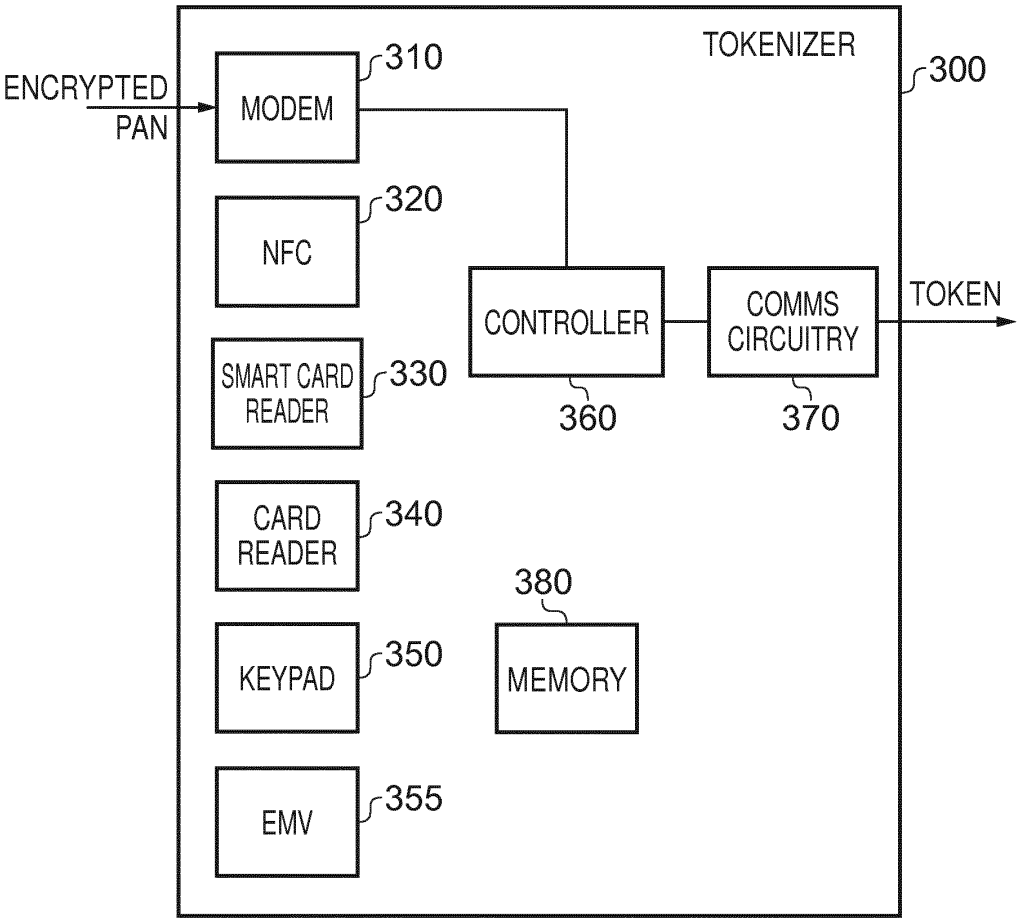

ENCRYPTED PAN
MODEM
310
TOKENIZER
300
NFC
320
CONTROLLER
COMMS CIRCUITRY
TOKEN
SMART CARD READER
330
360
370
CARD READER
340
380
KEYPAD
350
MEMORY
EMV
355

FIG. 4

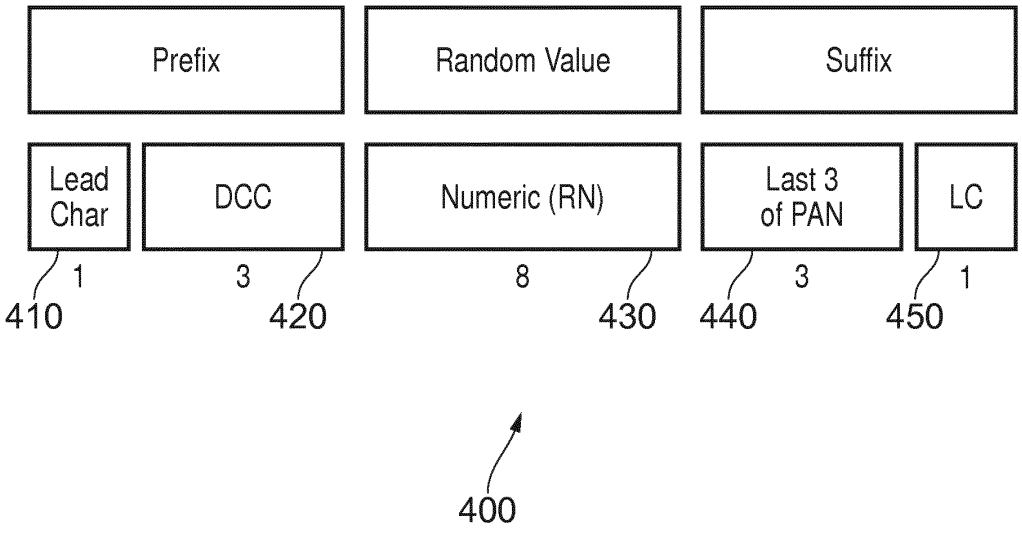

Prefix
Random Value
Suffix
Lead Char
DCC
Numeric (RN)
Last 3 of PAN
LC
1
3
8
3
1
410
420
430
440
450
400

FIG. 5A

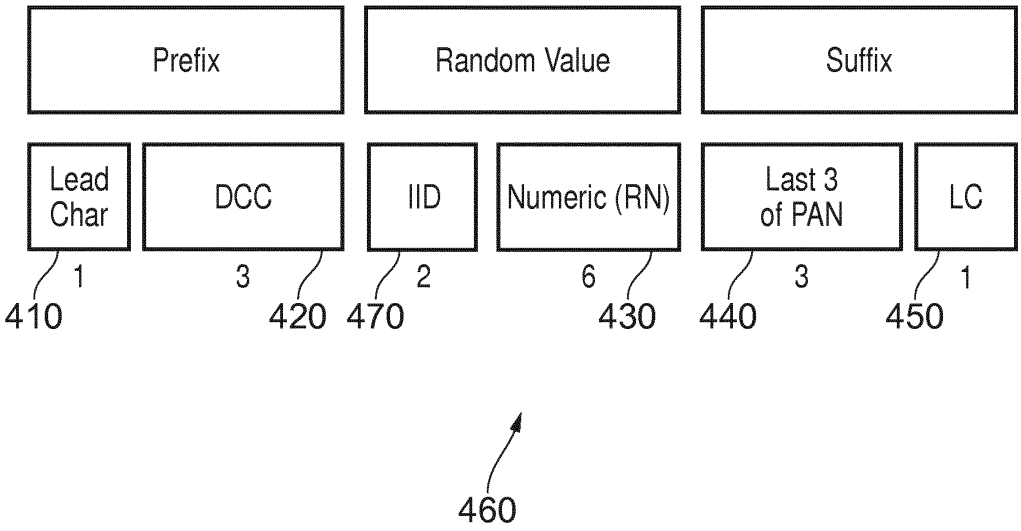

Prefix
Random Value
Suffix
Lead Char
DCC
IID
Numeric (RN)
Last 3 of PAN
LC
1
3
2
6
3
1
410
420
470
430
440
450
460

FIG. 5B

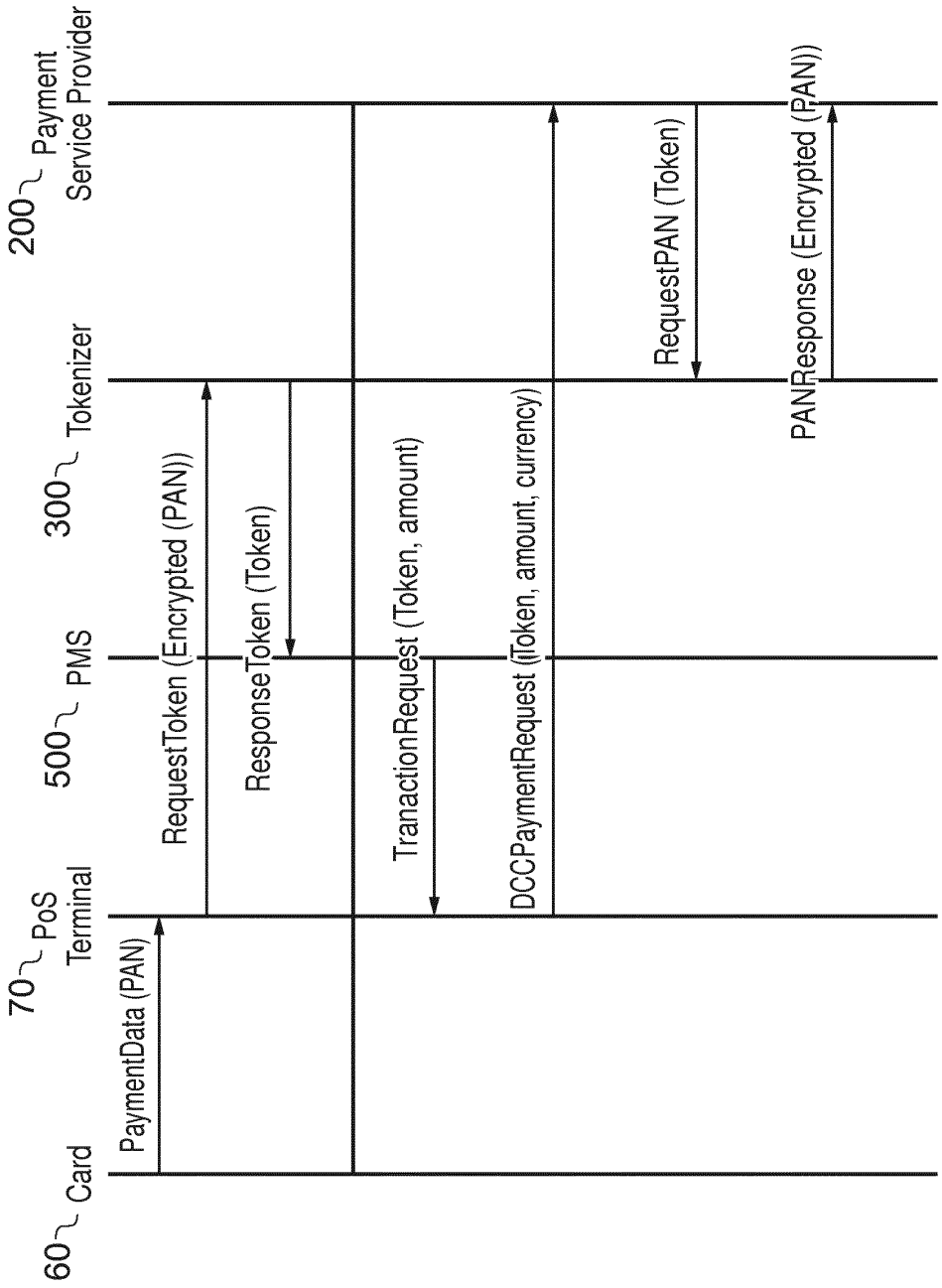

60 Card
70 PoS Terminal
500 PMS
300 Tokenizer
200 Payment Service Provider
PaymentData (PAN)
RequestToken (Encrypted (PAN))
ResponseToken (Token)
TranactionRequest (Token, amount)
DCCPaymentRequest (Token, amount, currency)
RequestPAN (Token)
PANResponse (Encrypted (PAN))

FIG. 6

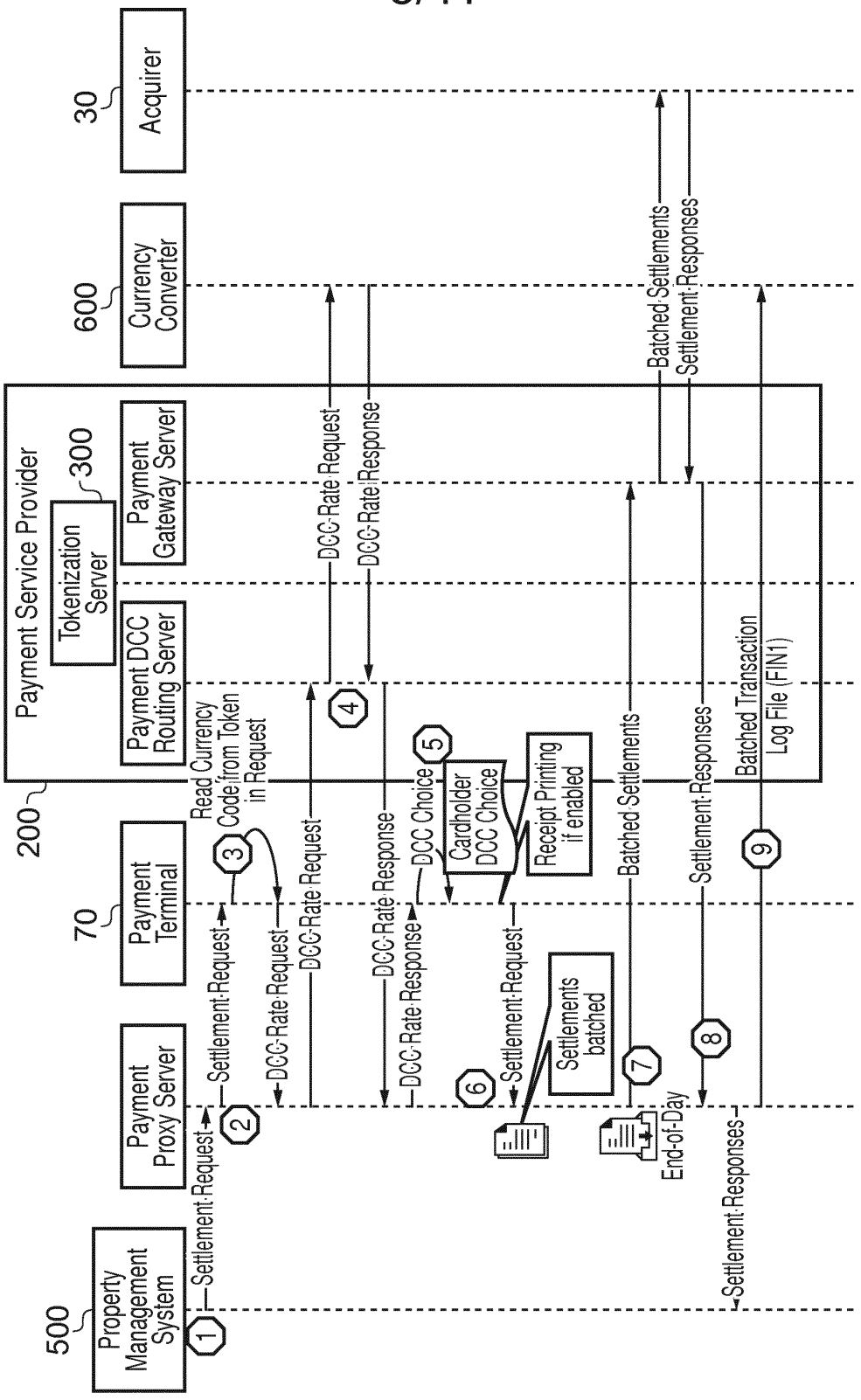

500
Property Management System
70
Payment Terminal
Payment Proxy Server
200
Payment Service Provider
Payment DCC Routing Server
Tokenization Server
300
Payment Gateway Server
600
Currency Converter
30
Acquirer
Settlement Request
DCC Rate Request
DCC Rate Response
Read Currency Code from Token in Request
DCC Choice
Cardholder DCC Choice
Receipt Printing if enabled
Settlements batched
Batched Settlements
End-of-Day
Settlement Responses
Batched Transaction Log File (FIN1)
1
2
3
4
5
6
7
8
9

FIG. 7

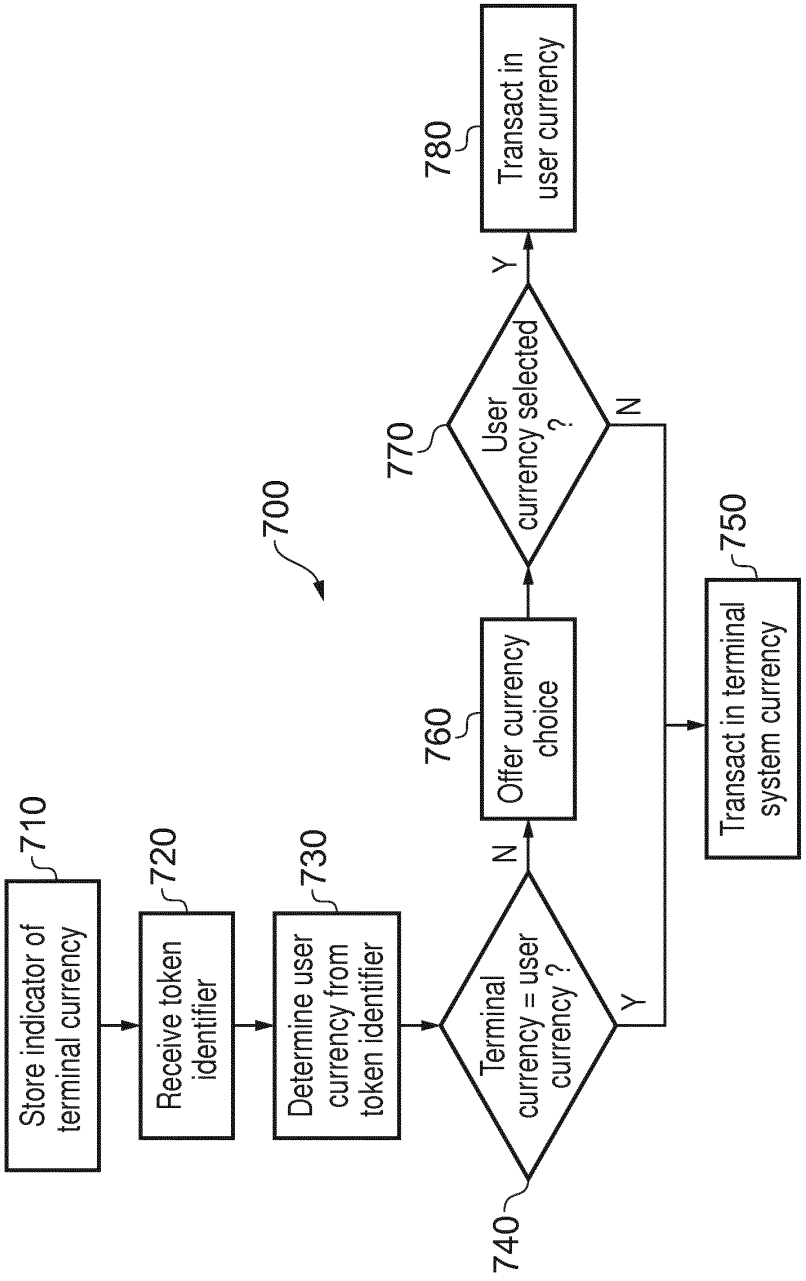

700
710
Store indicator of terminal currency
720
Receive token identifier
730
Determine user currency from token identifier
740
Terminal currency = user currency ?
N
Y
760
Offer currency choice
770
User currency selected ?
Y
N
780
Transact in user currency
750
Transact in terminal system currency

FIG. 8

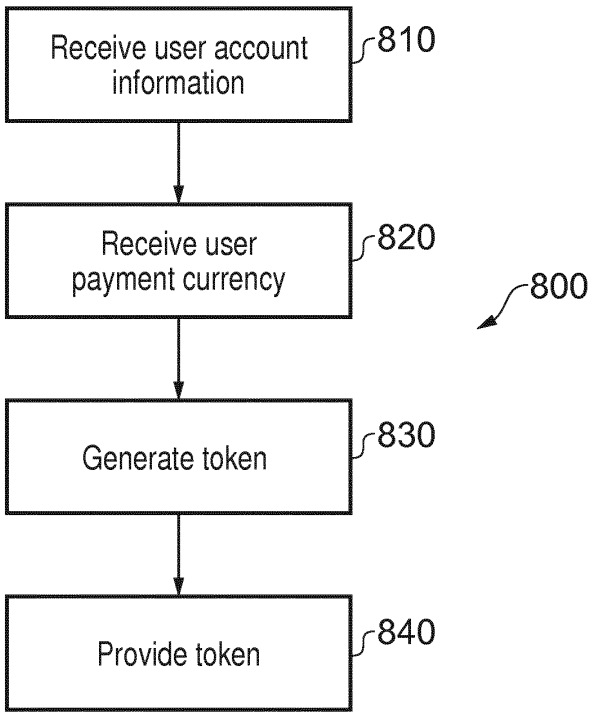

Receive user account information
810
Receive user payment currency
820
800
Generate token
830
Provide token
840

FIG. 9

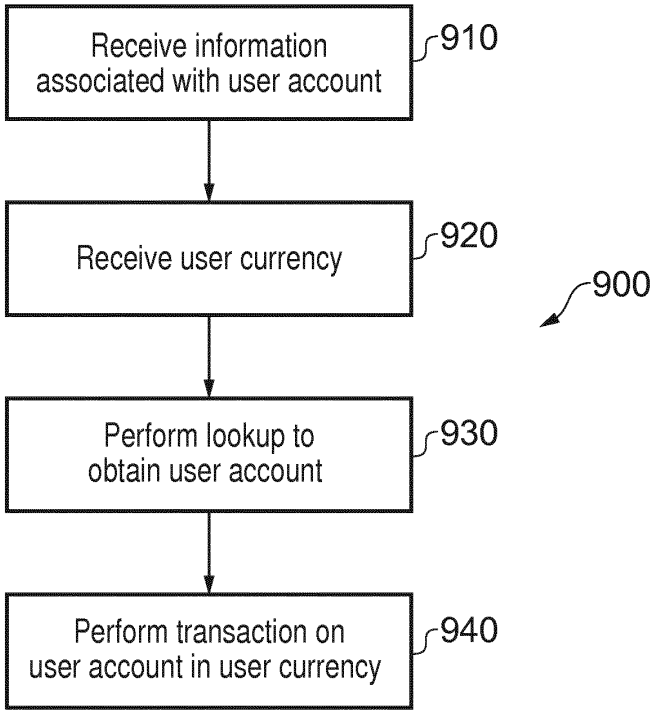

Receive information associated with user account
910
Receive user currency
920
900
Perform lookup to obtain user account
930
Perform transaction on user account in user currency
940

FIG. 10