FIG.1

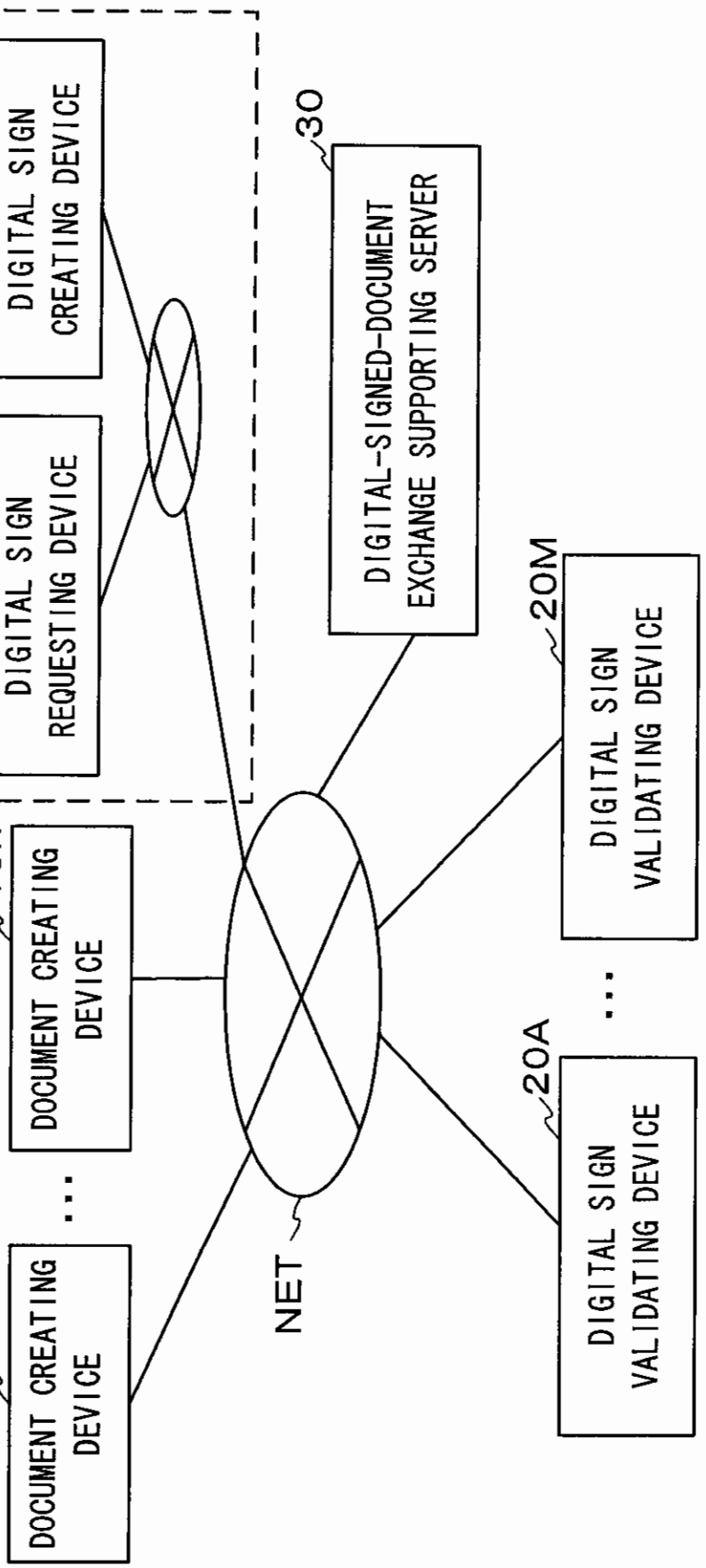

10Z
DOCUMENT CREATING SYSTEM
11
DIGITAL SIGN REQUESTING DEVICE
12
DIGITAL SIGN CREATING DEVICE
30
DIGITAL-SIGNED-DOCUMENT EXCHANGE SUPPORTING SERVER
10A
DOCUMENT CREATING DEVICE
10N
DOCUMENT CREATING DEVICE
NET
20A
DIGITAL SIGN VALIDATING DEVICE
20M
DIGITAL SIGN VALIDATING DEVICE

FIG.2

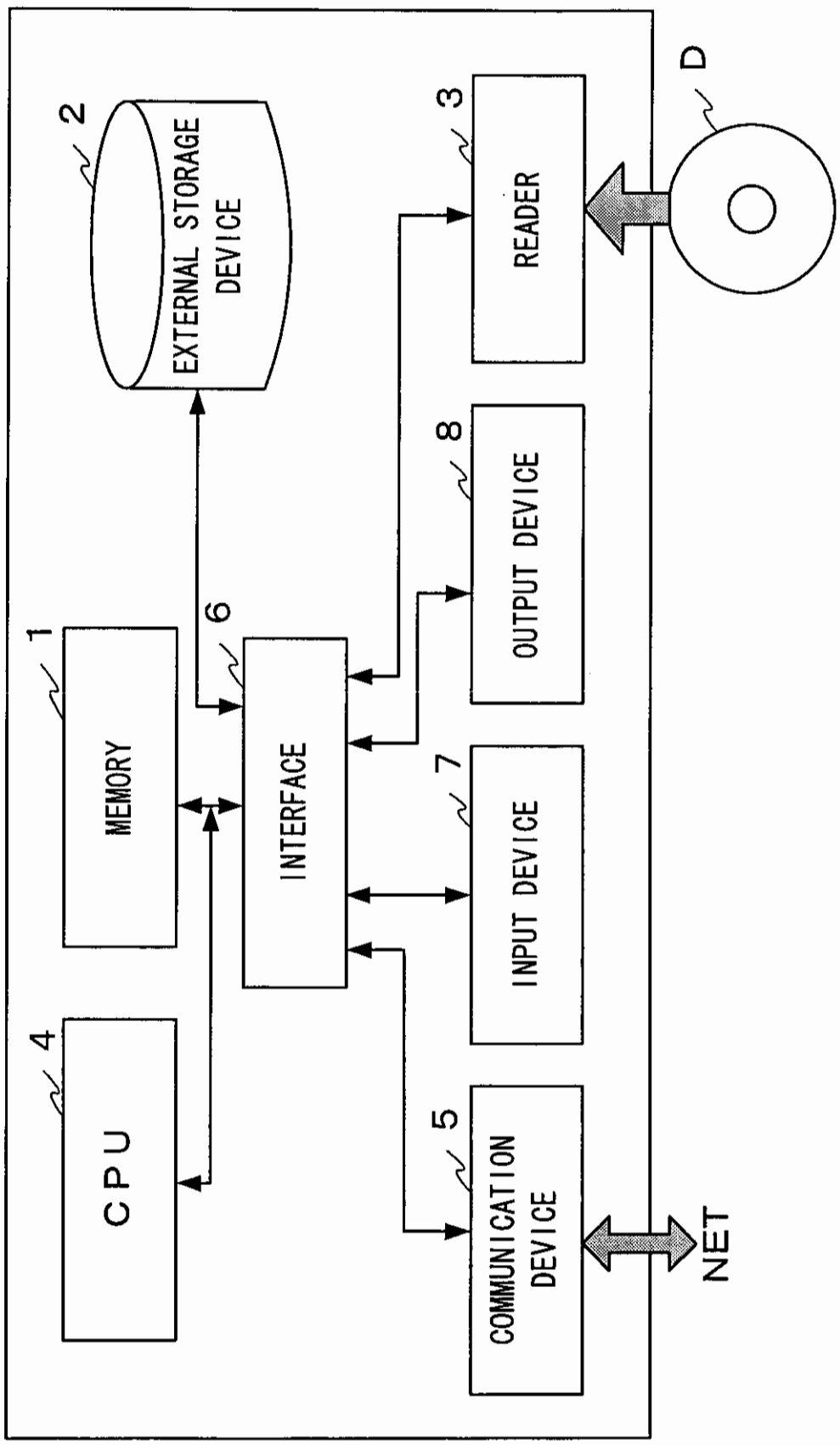

CPU
4
MEMORY
1
INTERFACE
6
EXTERNAL STORAGE DEVICE
2
READER
3
D
OUTPUT DEVICE
8
INPUT DEVICE
7
COMMUNICATION DEVICE
5
NET

FIG.3

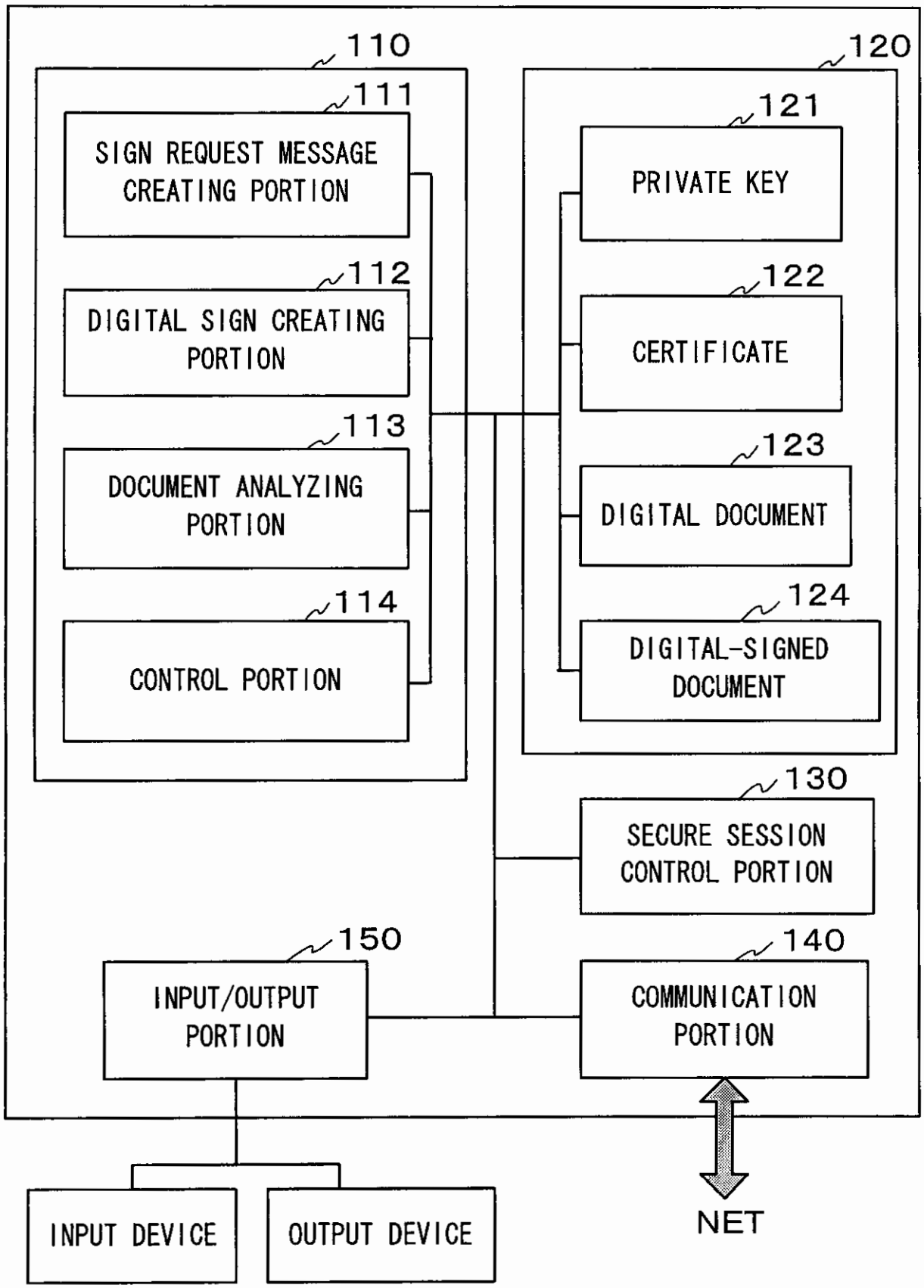

110
111
SIGN REQUEST MESSAGE CREATING PORTION
112
DIGITAL SIGN CREATING PORTION
113
DOCUMENT ANALYZING PORTION
114
CONTROL PORTION
120
121
PRIVATE KEY
122
CERTIFICATE
123
DIGITAL DOCUMENT
124
DIGITAL-SIGNED DOCUMENT
130
SECURE SESSION CONTROL PORTION
140
COMMUNICATION PORTION
150
INPUT/OUTPUT PORTION
INPUT DEVICE
OUTPUT DEVICE
NET

FIG.4

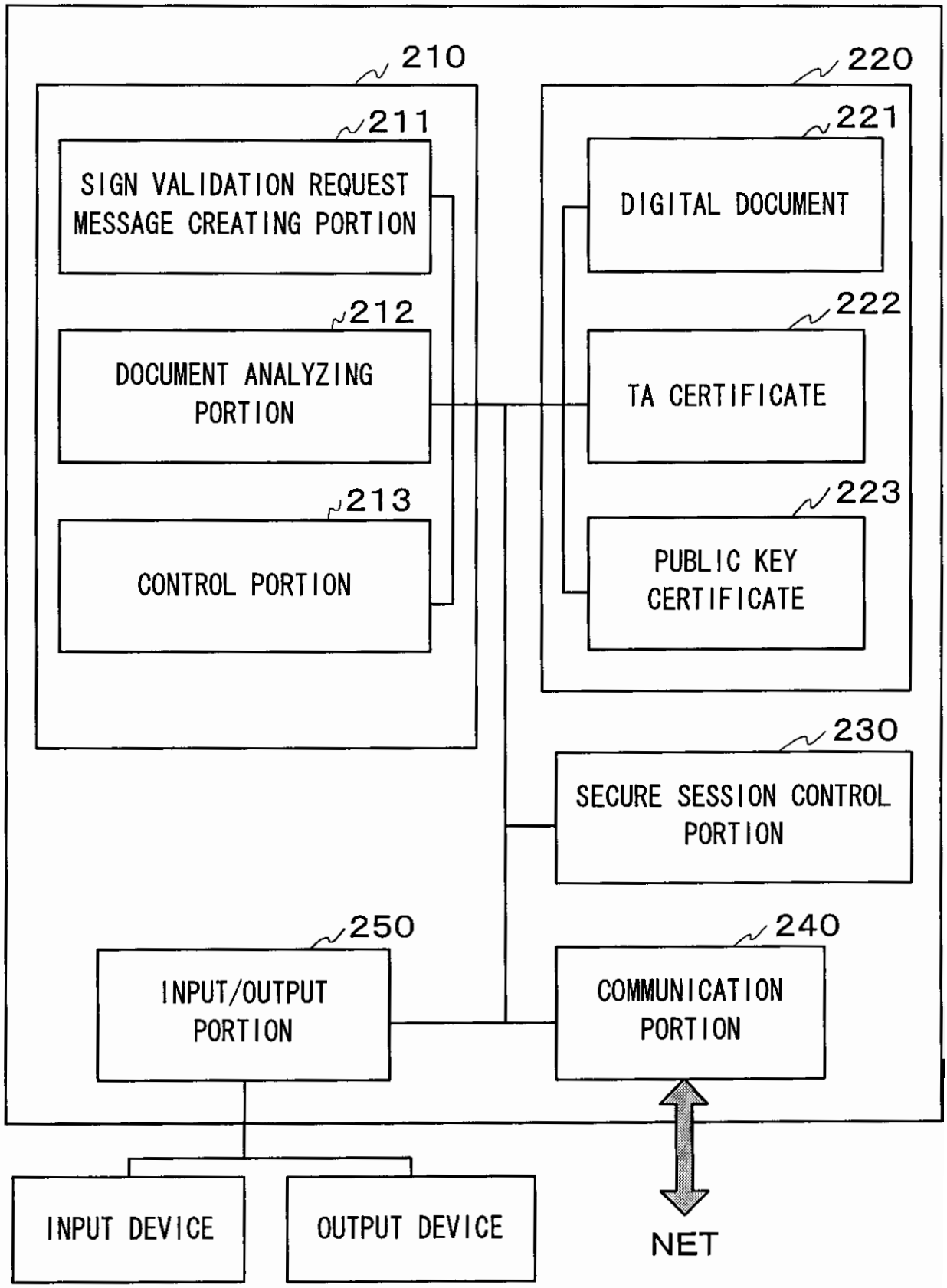

210
211
SIGN VALIDATION REQUEST MESSAGE CREATING PORTION
212
DOCUMENT ANALYZING PORTION
213
CONTROL PORTION
220
221
DIGITAL DOCUMENT
222
TA CERTIFICATE
223
PUBLIC KEY CERTIFICATE
230
SECURE SESSION CONTROL PORTION
250
INPUT/OUTPUT PORTION
240
COMMUNICATION PORTION
INPUT DEVICE
OUTPUT DEVICE
NET

FIG.5

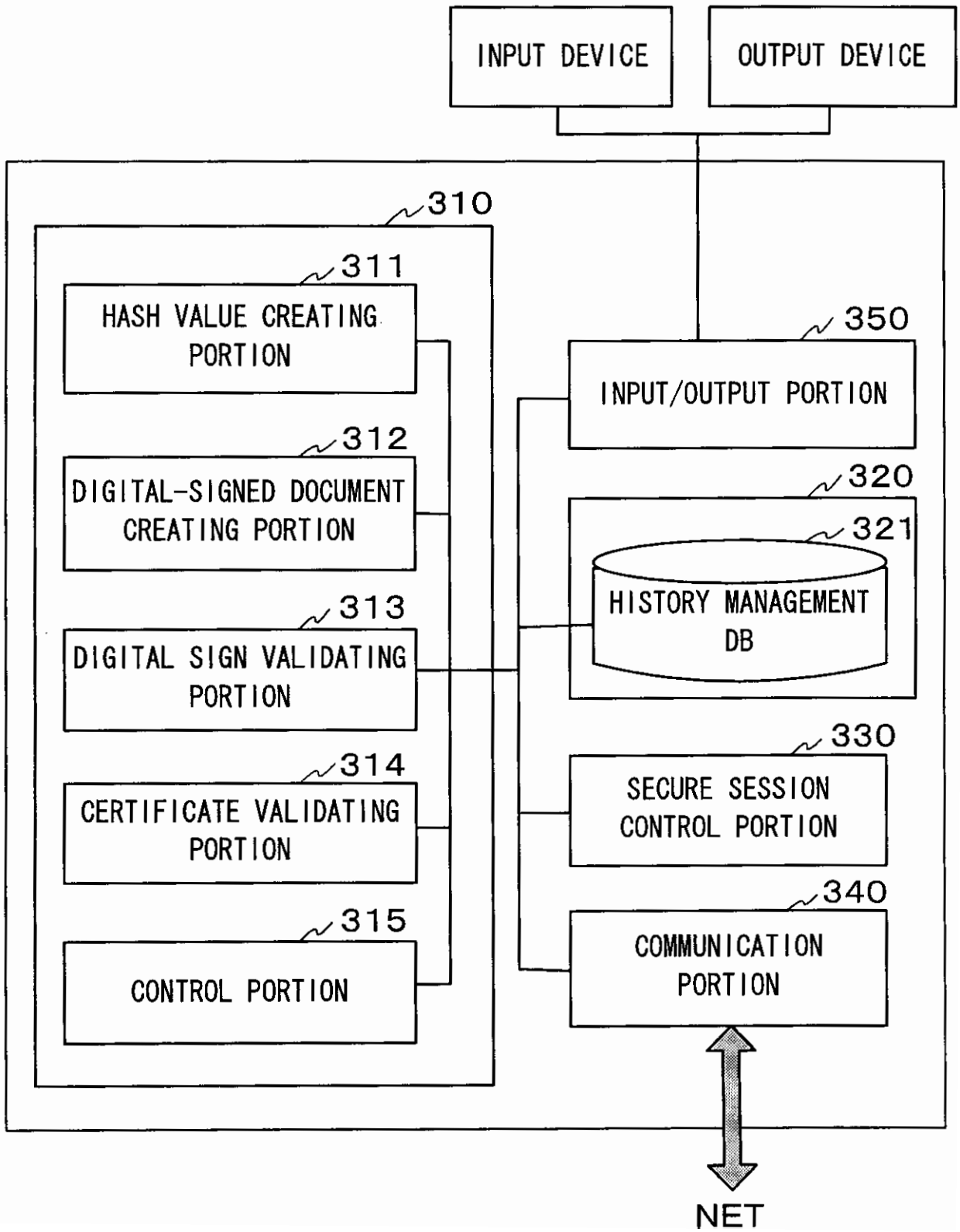

INPUT DEVICE
OUTPUT DEVICE
310
311
HASH VALUE CREATING PORTION
312
DIGITAL-SIGNED DOCUMENT CREATING PORTION
313
DIGITAL SIGN VALIDATING PORTION
314
CERTIFICATE VALIDATING PORTION
315
CONTROL PORTION
350
INPUT/OUTPUT PORTION
320
321
HISTORY MANAGEMENT DB
330
SECURE SESSION CONTROL PORTION
340
COMMUNICATION PORTION
NET

FIG.6

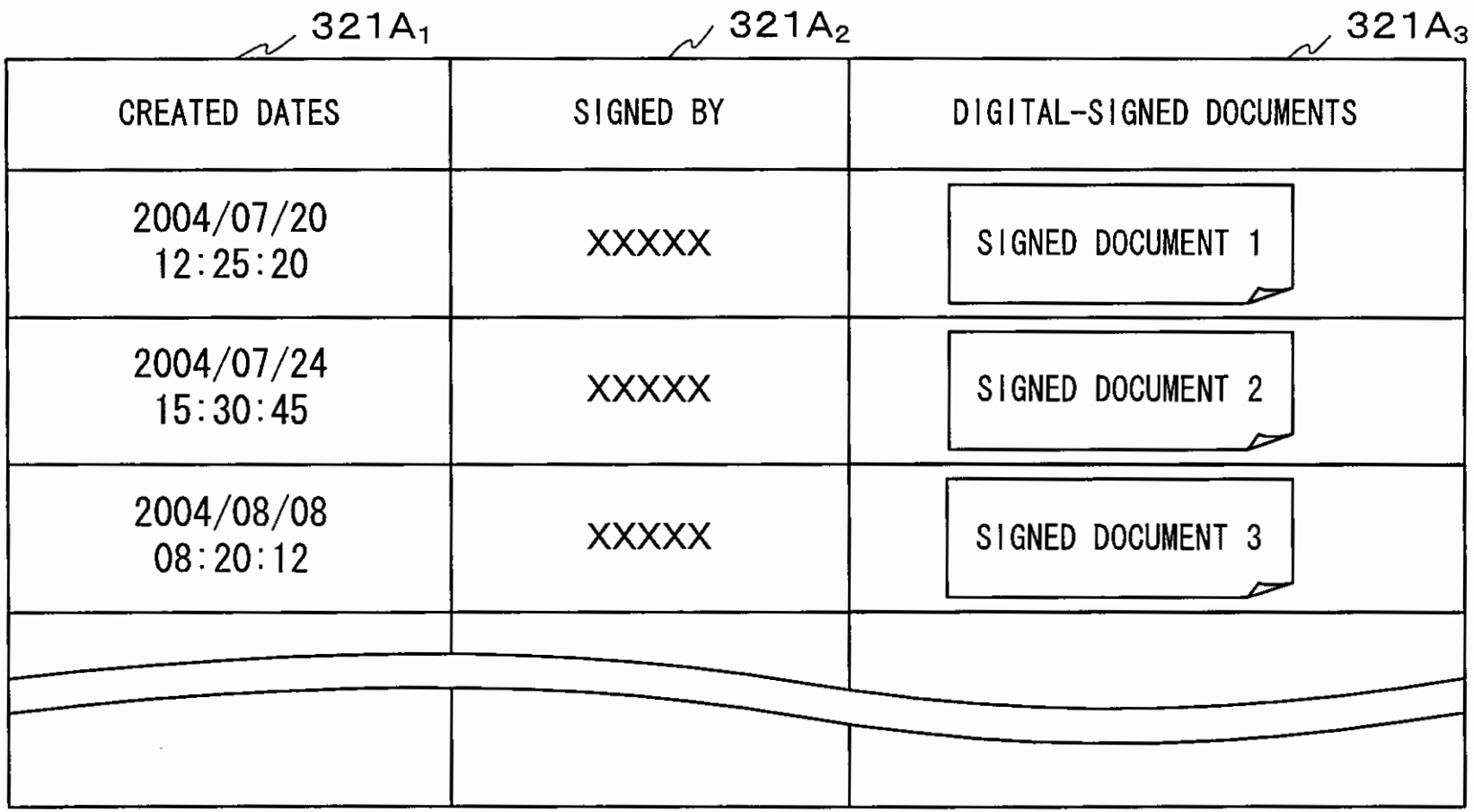

321A1
321A2
321A3
CREATED DATES
SIGNED BY
DIGITAL-SIGNED DOCUMENTS
2004/07/20 12:25:20
XXXXX
SIGNED DOCUMENT 1
2004/07/24 15:30:45
XXXXX
SIGNED DOCUMENT 2
2004/08/08 08:20:12
XXXXX
SIGNED DOCUMENT 3

FIG.7

321B1 SIGN VALIDATED DATES	321B2 SIGN VALIDATION RESULTS	321B3 CERTIFICATE VALIDATED DATES	321B4 CERTIFICATE VALIDATION RESULTS	321B5 VALIDATED BY	321B6 VALIDATION REQUESTS
2004/07/21 12:32:20	OK	2004/07/21 12:32:25	OK	XXXXX	SIGNED DOCUMENT 1, CERTIFICATE 1
2004/07/25 15:23:45	NG	—	—	XXXXX	SIGNED DOCUMENT 2, CERTIFICATE 2
2004/08/09 09:10:12	OK	2004/08/09 09:10:17	NG	XXXXX	SIGNED DOCUMENT 3, CERTIFICATE 3

FIG.8

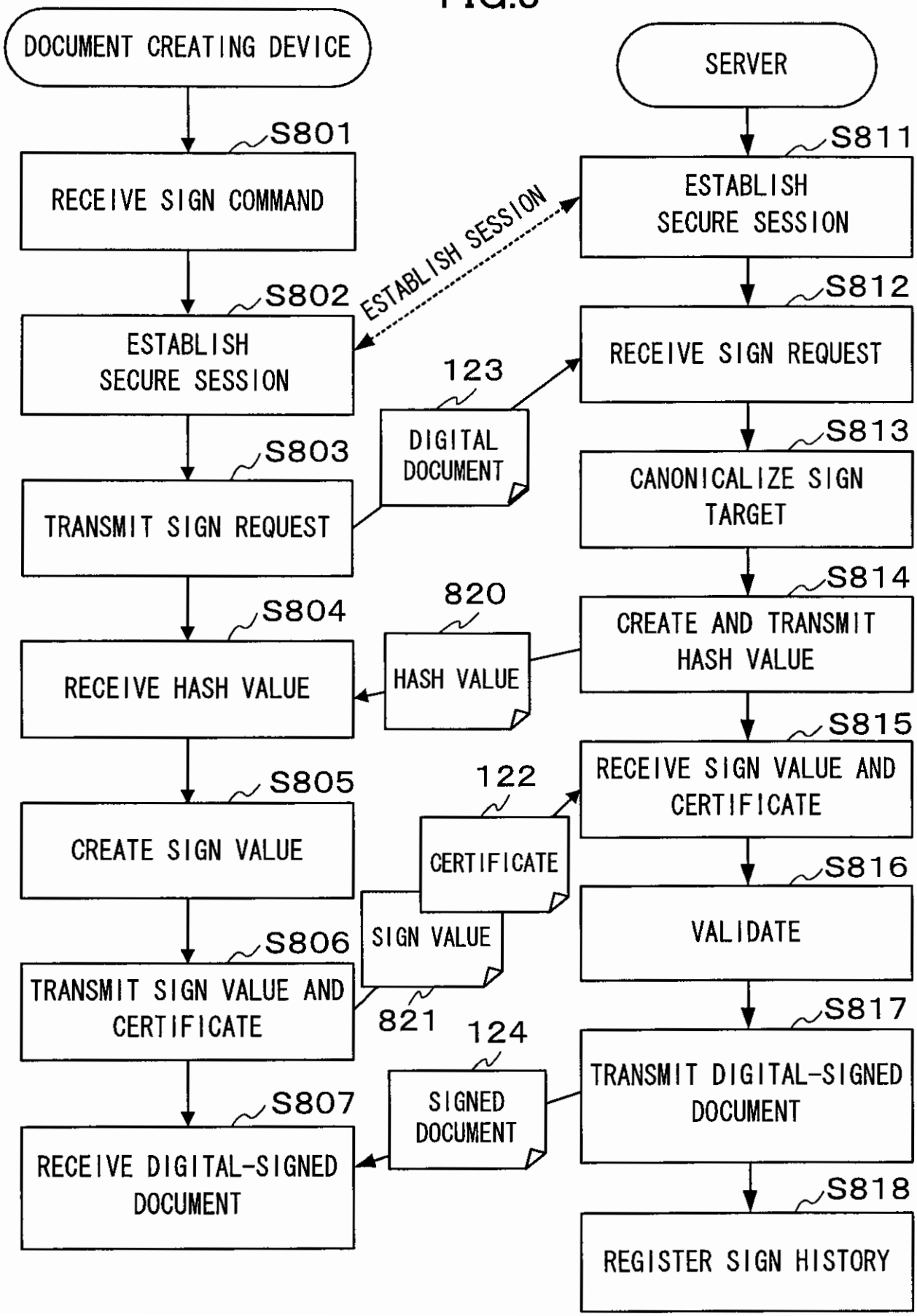
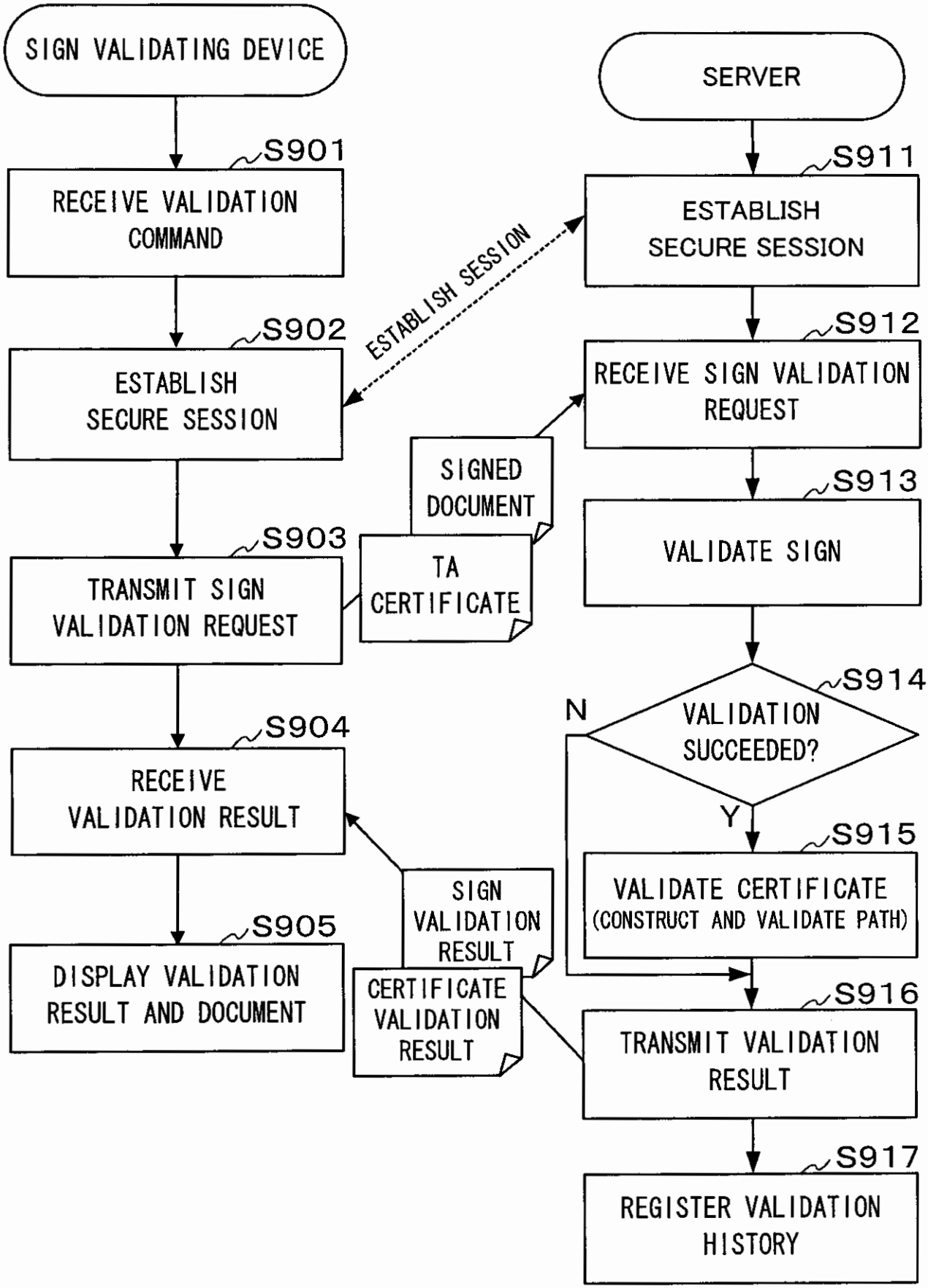

DOCUMENT CREATING DEVICE
SERVER
S801
RECEIVE SIGN COMMAND
S811
ESTABLISH SECURE SESSION
ESTABLISH SESSION
S802
ESTABLISH SECURE SESSION
S812
RECEIVE SIGN REQUEST
123
DIGITAL DOCUMENT
S803
TRANSMIT SIGN REQUEST
S813
CANONICALIZE SIGN TARGET
820
S804
RECEIVE HASH VALUE
HASH VALUE
S814
CREATE AND TRANSMIT HASH VALUE
S815
RECEIVE SIGN VALUE AND CERTIFICATE
122
S805
CREATE SIGN VALUE
CERTIFICATE
SIGN VALUE
S816
VALIDATE
S806
TRANSMIT SIGN VALUE AND CERTIFICATE
821
124
S817
TRANSMIT DIGITAL-SIGNED DOCUMENT
SIGNED DOCUMENT
S807
RECEIVE DIGITAL-SIGNED DOCUMENT
S818
REGISTER SIGN HISTORY

FIG.9


SIGN VALIDATING DEVICE
SERVER
S901
RECEIVE VALIDATION COMMAND
S911
ESTABLISH SECURE SESSION
ESTABLISH SESSION
S902
ESTABLISH SECURE SESSION
S912
RECEIVE SIGN VALIDATION REQUEST
SIGNED DOCUMENT
TA CERTIFICATE
S903
TRANSMIT SIGN VALIDATION REQUEST
S913
VALIDATE SIGN
S914
VALIDATION SUCCEEDED?
N
Y
S904
RECEIVE VALIDATION RESULT
S915
VALIDATE CERTIFICATE (CONSTRUCT AND VALIDATE PATH)
SIGN VALIDATION RESULT
CERTIFICATE VALIDATION RESULT
S905
DISPLAY VALIDATION RESULT AND DOCUMENT
S916
TRANSMIT VALIDATION RESULT
S917
REGISTER VALIDATION HISTORY