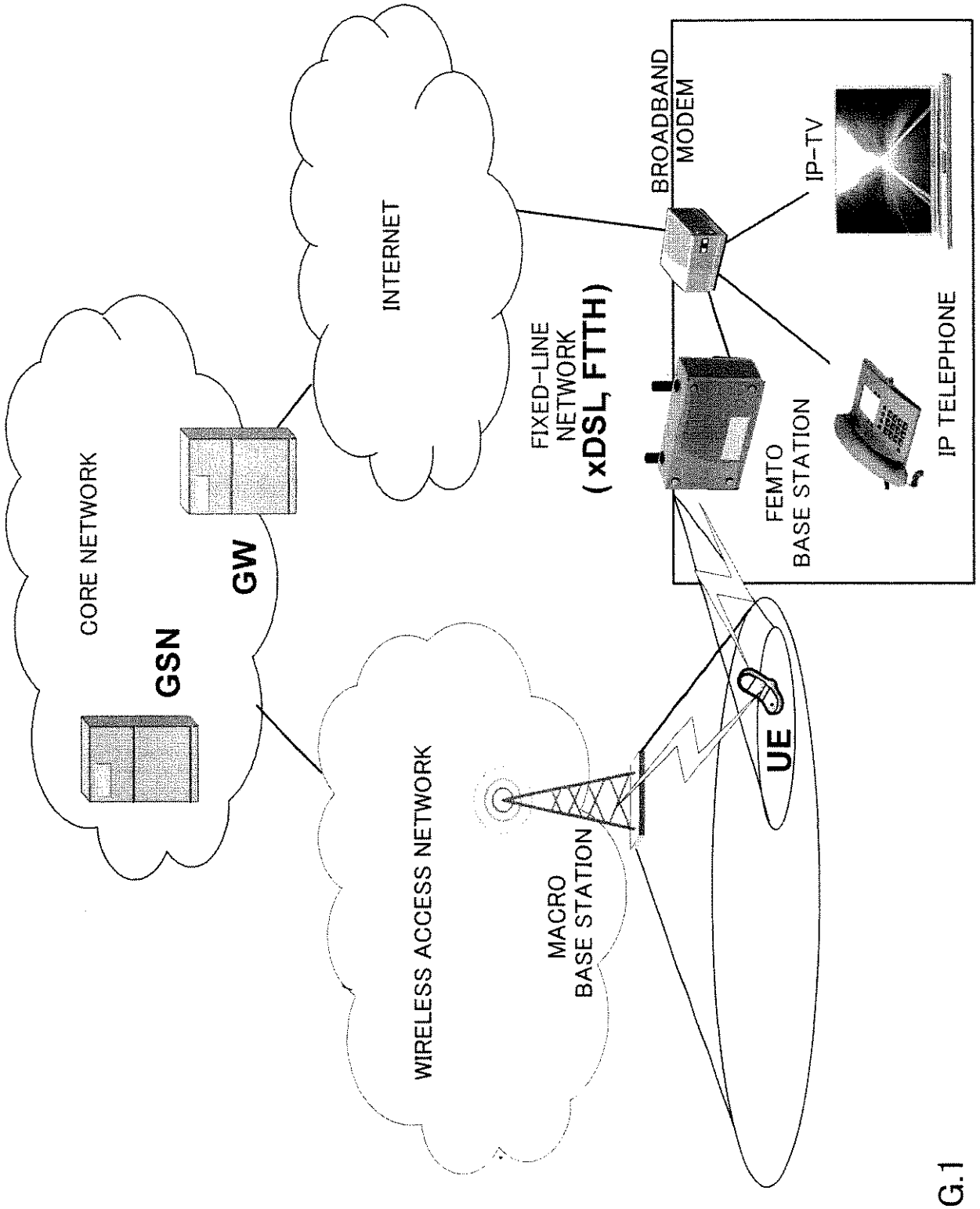

CORE NETWORK
GSN
GW
INTERNET
FIXED-LINE NETWORK
(xDSL, FTTH)
BROADBAND MODEM
IP-TV
IP TELEPHONE
FEMTO BASE STATION
WIRELESS ACCESS NETWORK
MACRO BASE STATION
UE

FIG.1

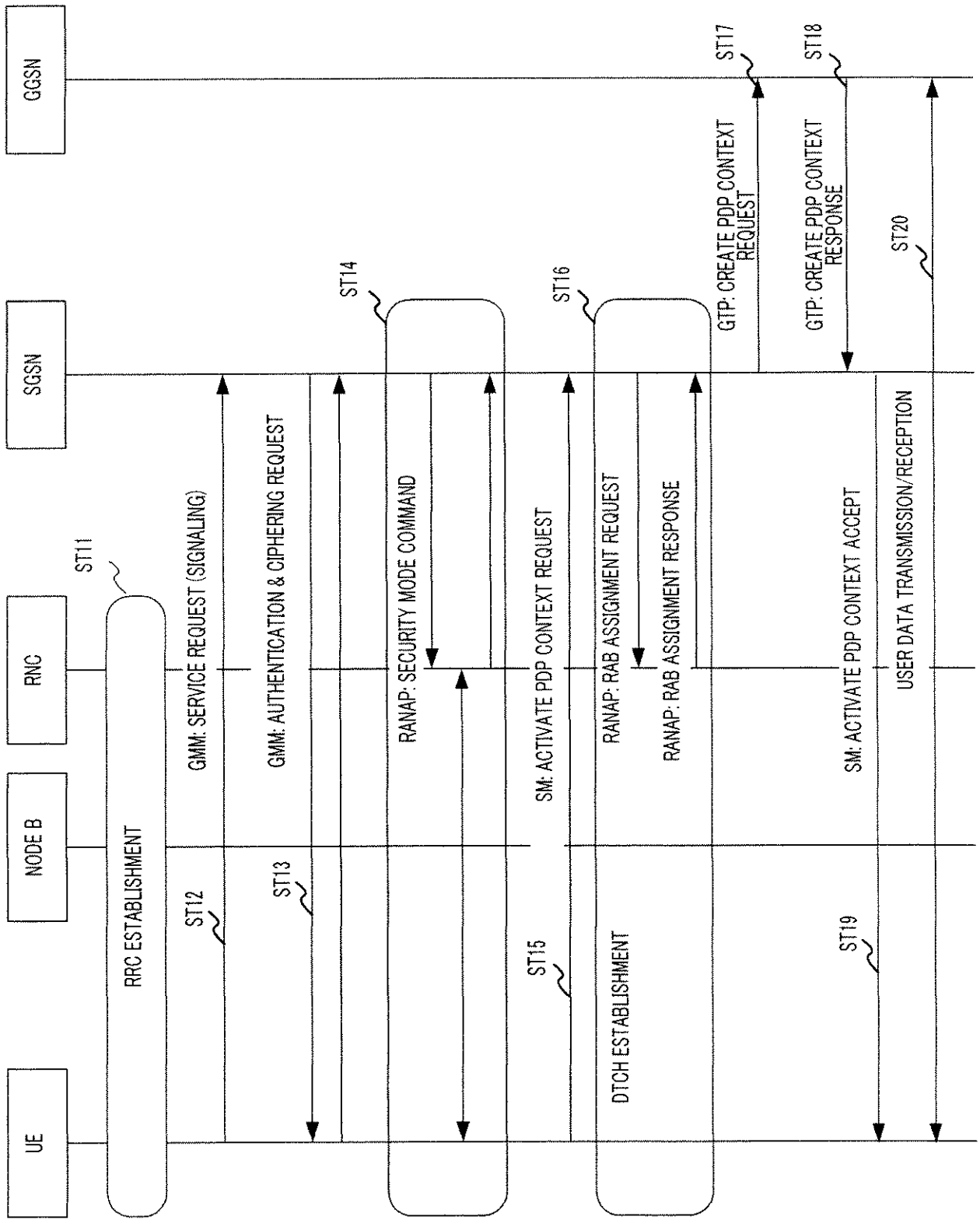

UE
NODE B
RNC
SGSN
GGSN
ST11
RRC ESTABLISHMENT
ST12
GMM: SERVICE REQUEST (SIGNALING)
ST13
GMM: AUTHENTICATION & CIPHERING REQUEST
ST14
RANAP: SECURITY MODE COMMAND
ST15
SM: ACTIVATE PDP CONTEXT REQUEST
ST16
RANAP: RAB ASSIGNMENT REQUEST
RANAP: RAB ASSIGNMENT RESPONSE
DTCH ESTABLISHMENT
ST17
GTP: CREATE PDP CONTEXT REQUEST
ST18
GTP: CREATE PDP CONTEXT RESPONSE
ST19
SM: ACTIVATE PDP CONTEXT ACCEPT
ST20
USER DATA TRANSMISSION/RECEPTION

FIG.2

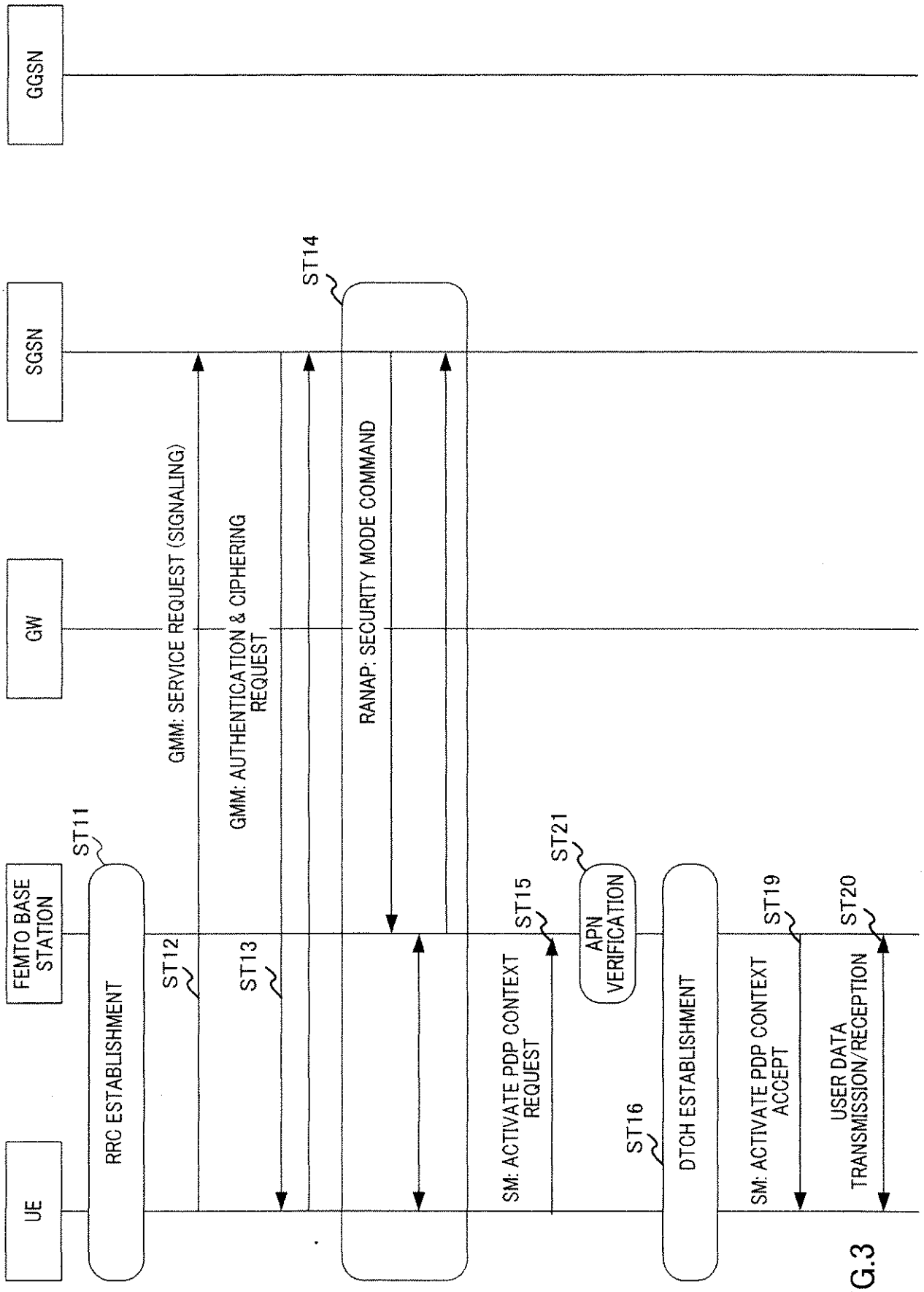

UE
FEMTO BASE STATION
GW
SGSN
GGSN
ST11
RRC ESTABLISHMENT
ST12
GMM: SERVICE REQUEST (SIGNALING)
ST13
GMM: AUTHENTICATION & CIPHERING REQUEST
ST14
RANAP: SECURITY MODE COMMAND
ST15
SM: ACTIVATE PDP CONTEXT REQUEST
ST21
APN VERIFICATION
ST16
DTCH ESTABLISHMENT
ST19
SM: ACTIVATE PDP CONTEXT ACCEPT
ST20
USER DATA TRANSMISSION/RECEPTION

FIG.3

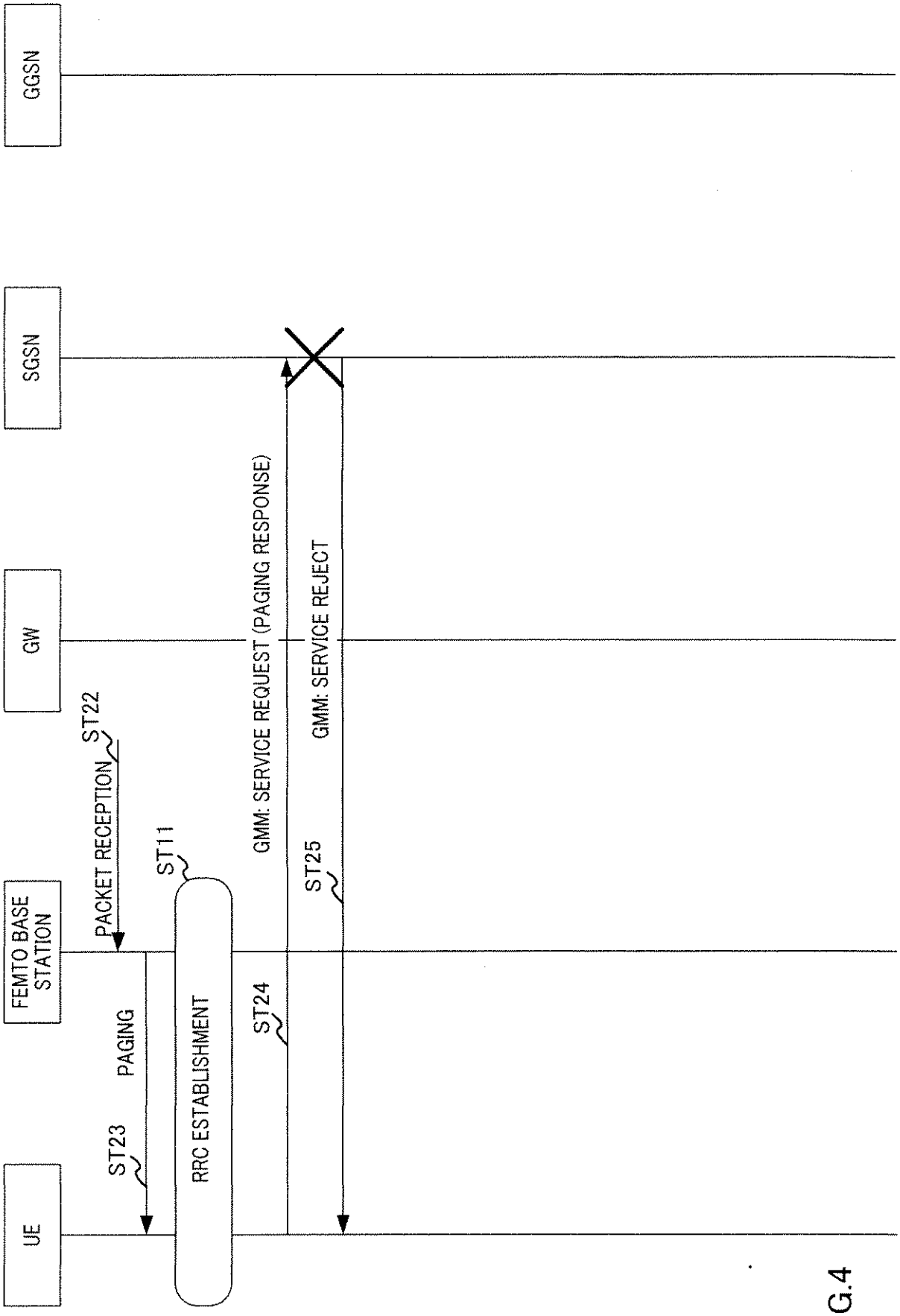

GGSN
SGSN
GW
FEMTO BASE STATION
UE
ST22
PACKET RECEPTION
ST11
PAGING
ST23
RRC ESTABLISHMENT
ST24
GMM: SERVICE REQUEST (PAGING RESPONSE)
ST25
GMM: SERVICE REJECT

FIG.4

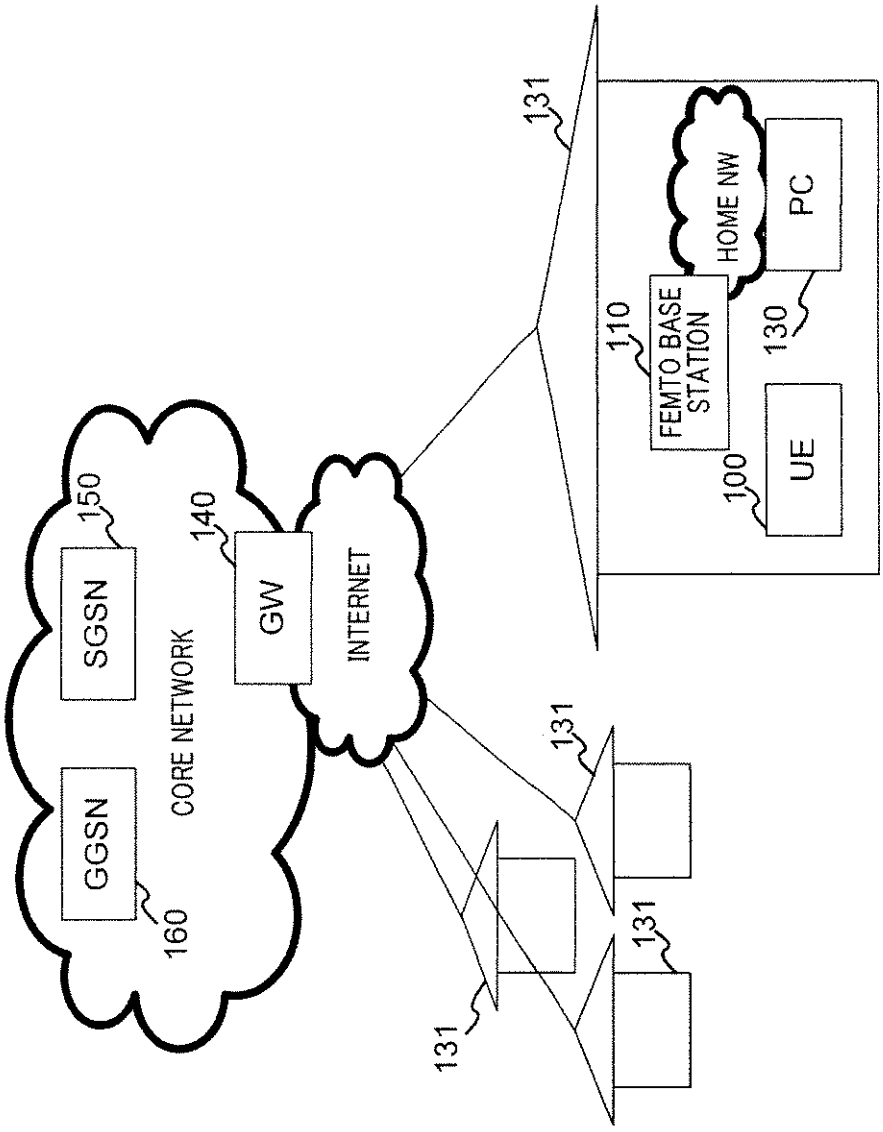

131
HOME NW
PC
130
110
FEMTO BASE STATION
100
UE
131
131
131
150
SGSN
140
GW
INTERNET
GGSN
160
CORE NETWORK

FIG.5

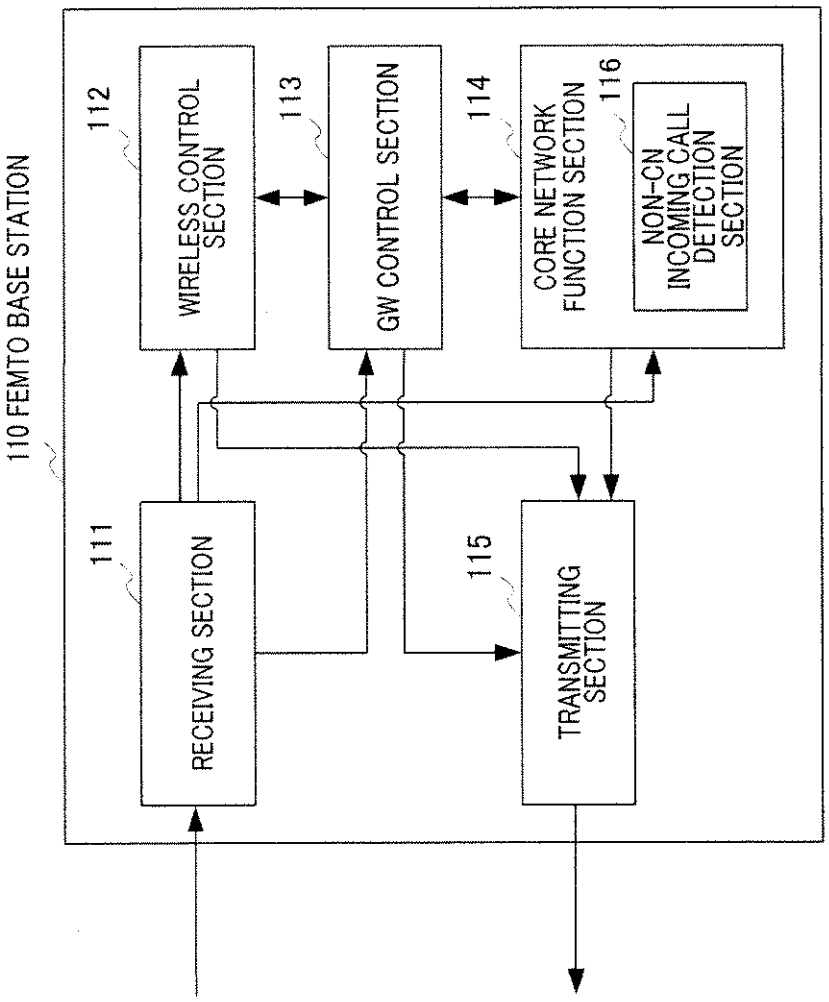

110 FEMTO BASE STATION
112
WIRELESS CONTROL SECTION
113
GW CONTROL SECTION
114
CORE NETWORK FUNCTION SECTION
116
NON-CN INCOMING CALL DETECTION SECTION
111
RECEIVING SECTION
115
TRANSMITTING SECTION

FIG.6

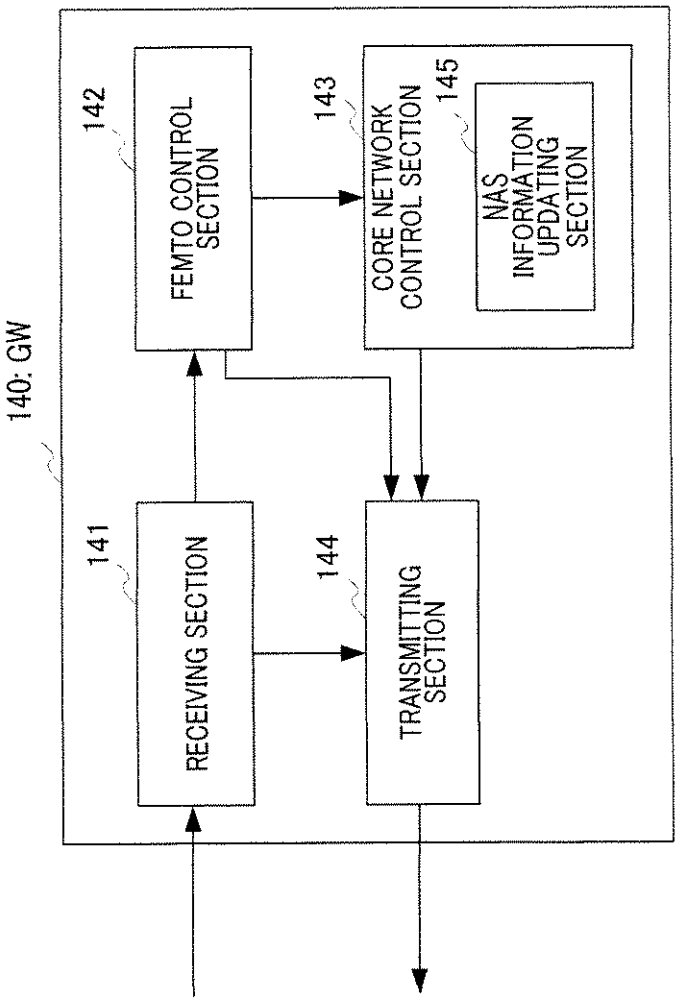

140: GW
141
RECEIVING SECTION
142
FEMTO CONTROL SECTION
143
CORE NETWORK CONTROL SECTION
145
NAS INFORMATION UPDATING SECTION
144
TRANSMITTING SECTION

FIG.7

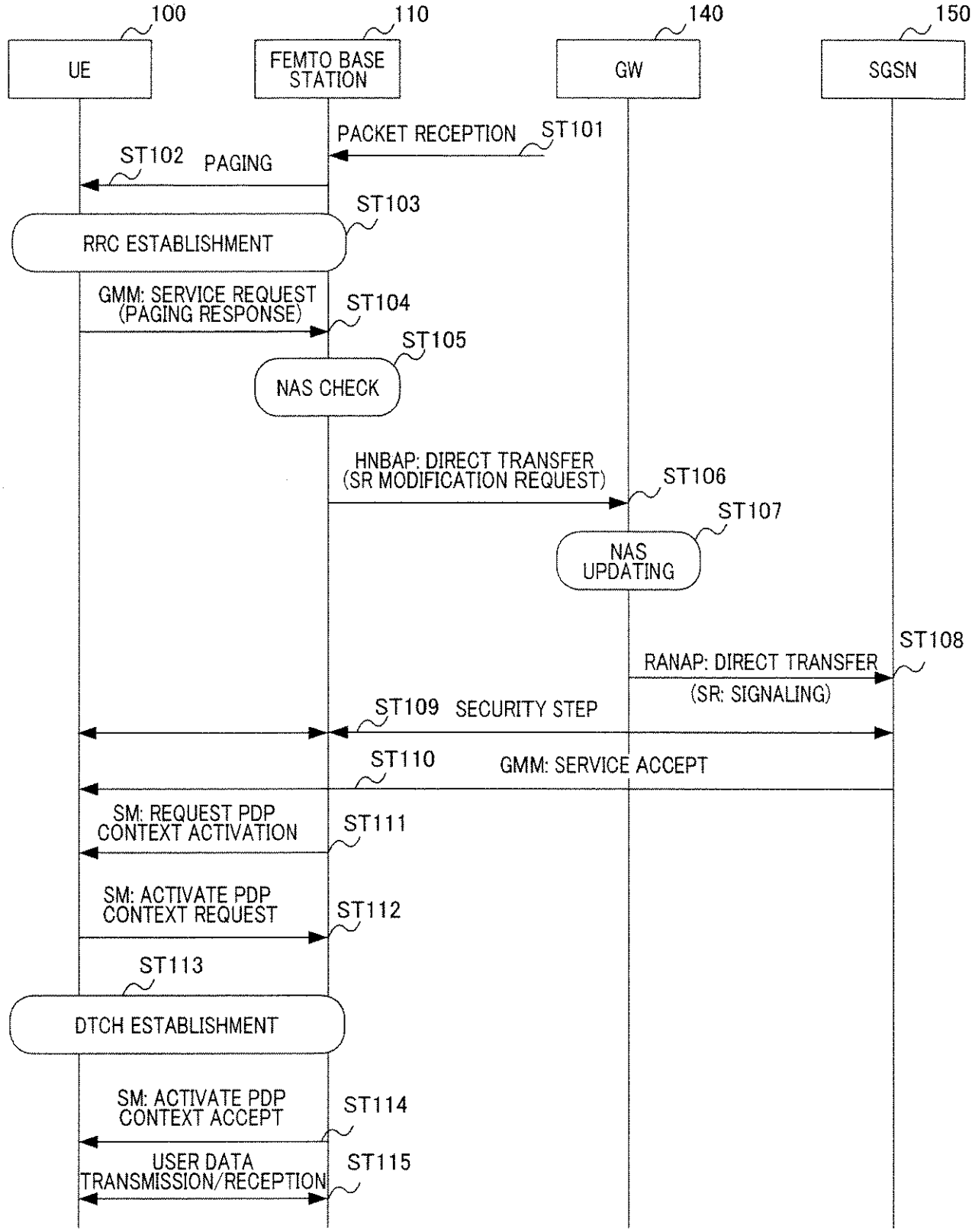

100
110
140
150
UE
FEMTO BASE STATION
GW
SGSN
PACKET RECEPTION
ST101
ST102
PAGING
ST103
RRC ESTABLISHMENT
GMM: SERVICE REQUEST (PAGING RESPONSE)
ST104
ST105
NAS CHECK
HNBAP: DIRECT TRANSFER (SR MODIFICATION REQUEST)
ST106
ST107
NAS UPDATING
ST108
RANAP: DIRECT TRANSFER (SR: SIGNALING)
ST109
SECURITY STEP
ST110
GMM: SERVICE ACCEPT
SM: REQUEST PDP CONTEXT ACTIVATION
ST111
SM: ACTIVATE PDP CONTEXT REQUEST
ST112
ST113
DTCH ESTABLISHMENT
SM: ACTIVATE PDP CONTEXT ACCEPT
ST114
USER DATA TRANSMISSION/RECEPTION
ST115

FIG.8

PARAMETER
MESSAGE TYPE
CN DOMAIN ID
CONTEXT ID
SR MODIFICATION REQUEST
RANAP MESSAGE

IE/GROUP NAME	IE TYPE AND REFERENCE
SR MODIFICATION REQUEST	
>MODIFICATION NECESSITY	ENUMERATED (NECESSARY, NOT NECESSARY)
>MODIFICATION CONTENTS	ENUERATED (PAGING RESPONSE->SIGNALING ,..

FIG.9

PARAMETER
MESSAGE TYPE
ENB UE S1AP ID
NAS-PDU
TAI
E-UTRAN CGI
RRC ESTABLISHMENT CAUSE
SR MODIFICATION INDICATOR

IE/GROUP NAME	IE TYPE AND REFERENCE
SR MODIFICATION INDICATOR	
> MODIFICATION NECESSITY	ENUMERATED (NECESSARY, NOT NECESSARY)
MODIFICATION CONTENTS	ENUMERATED (PAGING RESPONSE -> SIGNALING, ...)

FIG.10

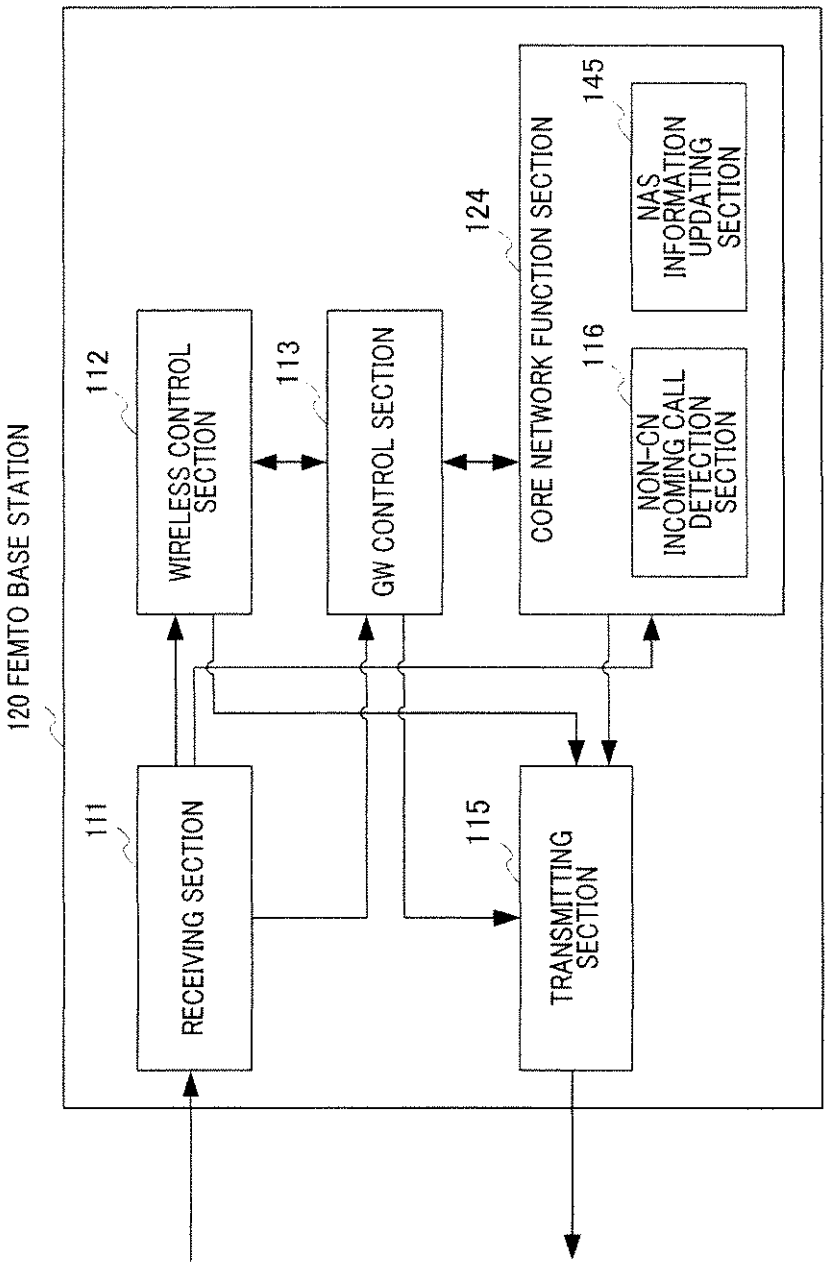

120 FEMTO BASE STATION
111
RECEIVING SECTION
112
WIRELESS CONTROL SECTION
113
GW CONTROL SECTION
115
TRANSMITTING SECTION
124
CORE NETWORK FUNCTION SECTION
116
NON-CN INCOMING CALL DETECTION SECTION
145
NAS INFORMATION UPDATING SECTION

FIG.11

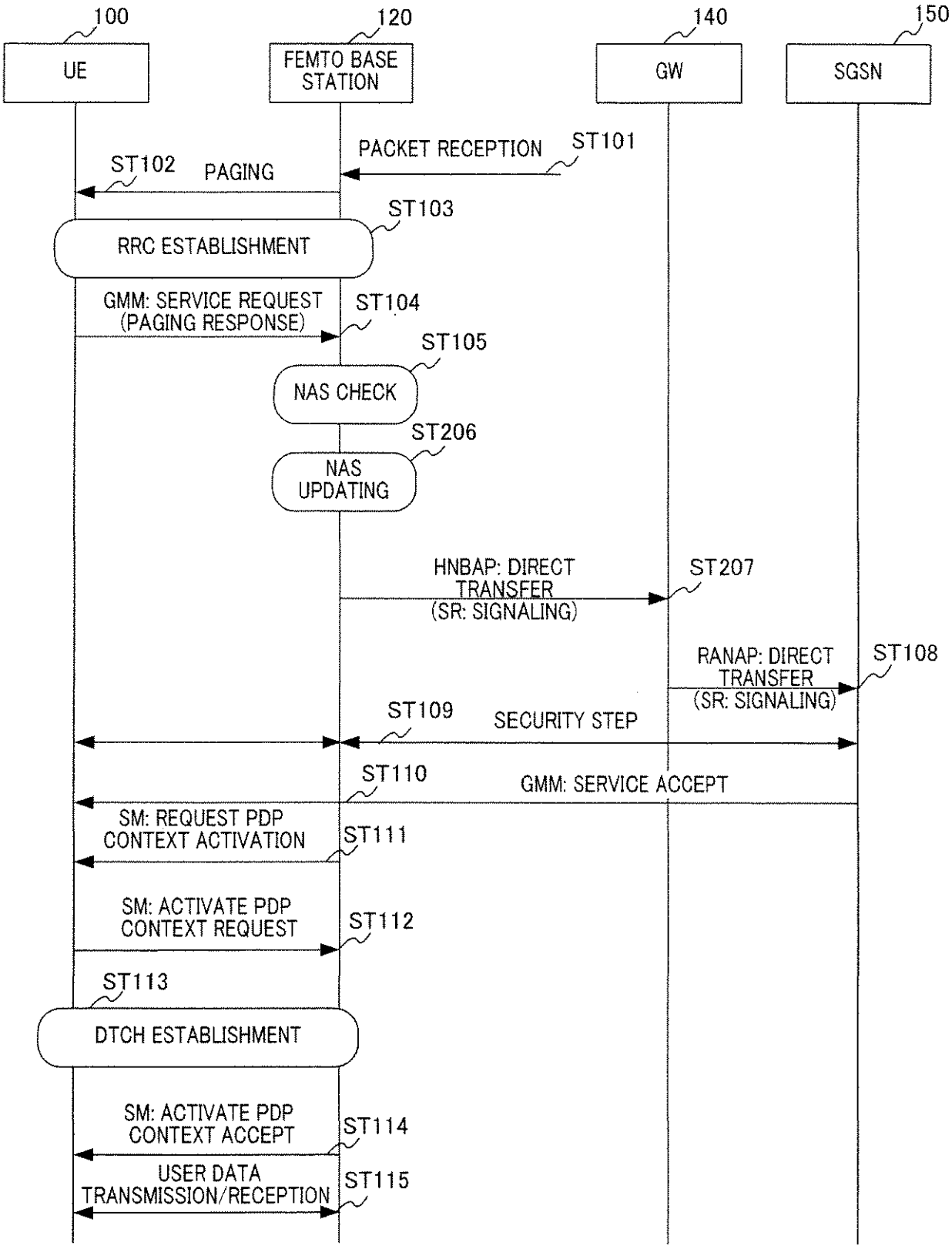

100
UE
120
FEMTO BASE STATION
140
GW
150
SGSN
PACKET RECEPTION
ST101
ST102
PAGING
ST103
RRC ESTABLISHMENT
GMM: SERVICE REQUEST (PAGING RESPONSE)
ST104
ST105
NAS CHECK
ST206
NAS UPDATING
HNBAP: DIRECT TRANSFER (SR: SIGNALING)
ST207
RANAP: DIRECT TRANSFER (SR: SIGNALING)
ST108
ST109
SECURITY STEP
ST110
GMM: SERVICE ACCEPT
SM: REQUEST PDP CONTEXT ACTIVATION
ST111
SM: ACTIVATE PDP CONTEXT REQUEST
ST112
ST113
DTCH ESTABLISHMENT
SM: ACTIVATE PDP CONTEXT ACCEPT
ST114
USER DATA TRANSMISSION/RECEPTION
ST115

FIG.12

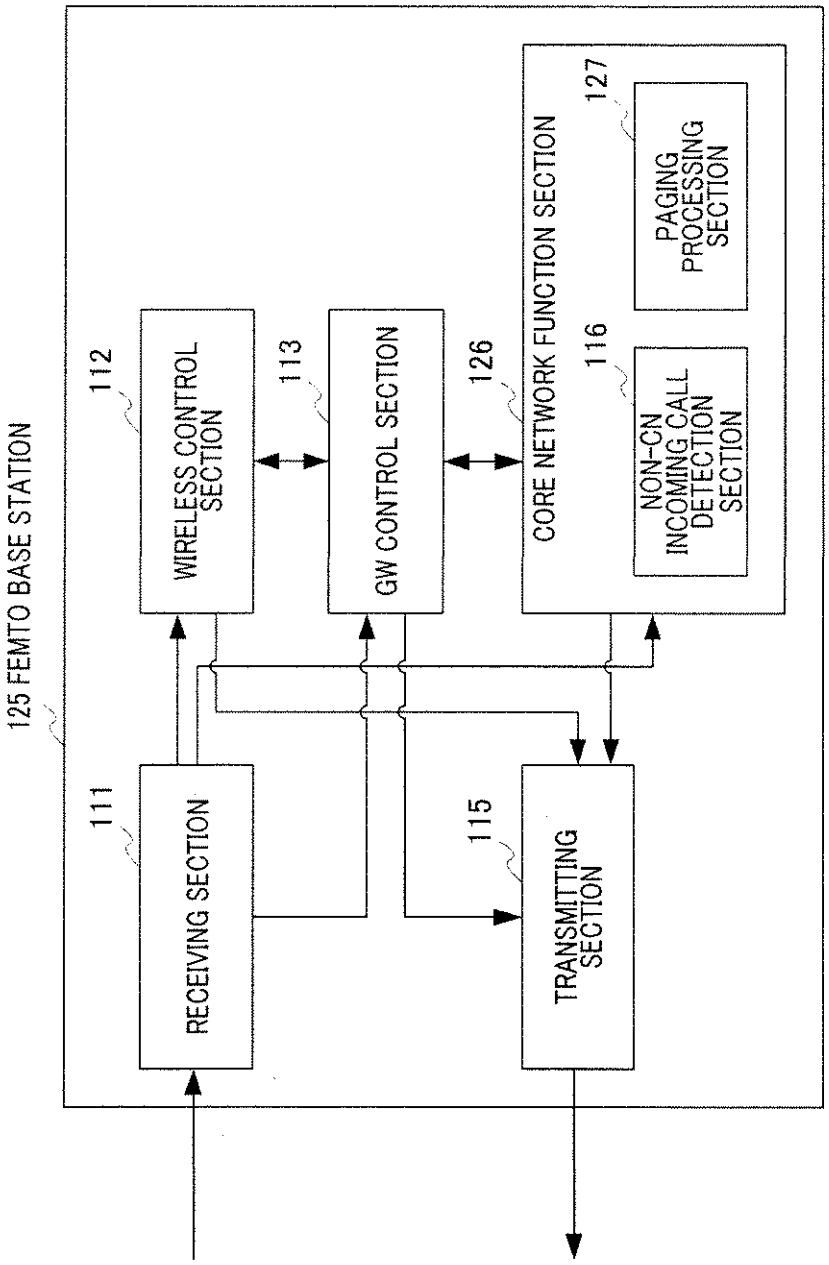

125 FEMTO BASE STATION
111
RECEIVING SECTION
112
WIRELESS CONTROL SECTION
113
GW CONTROL SECTION
115
TRANSMITTING SECTION
126
CORE NETWORK FUNCTION SECTION
116
NON-CN INCOMING CALL DETECTION SECTION
127
PAGING PROCESSING SECTION

FIG.13

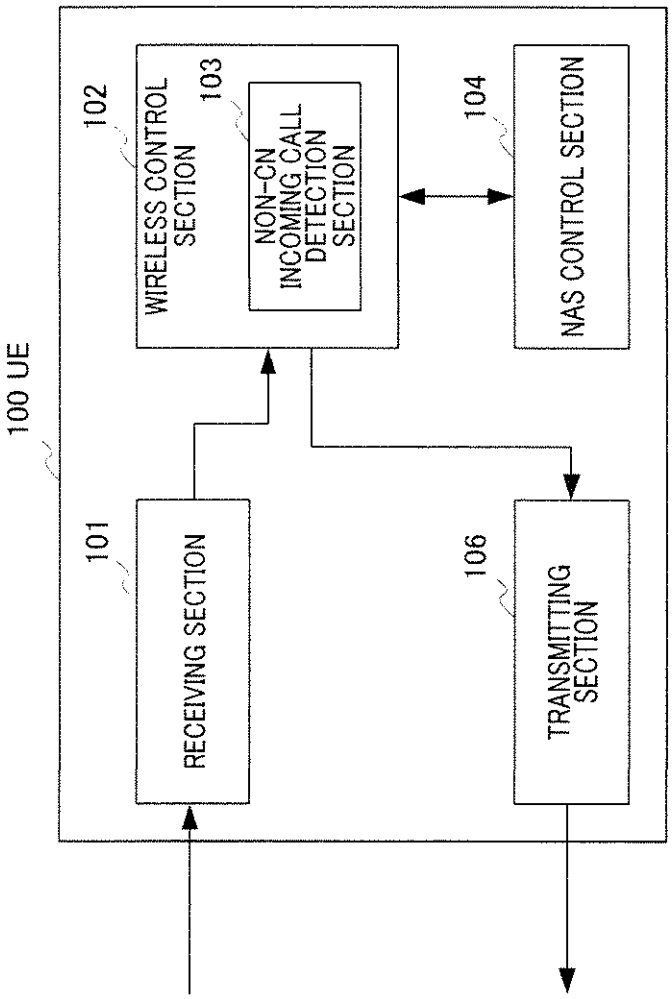

100 UE
101
RECEIVING SECTION
102
WIRELESS CONTROL SECTION
103
NON-CN INCOMING CALL DETECTION SECTION
104
NAS CONTROL SECTION
106
TRANSMITTING SECTION

FIG.14

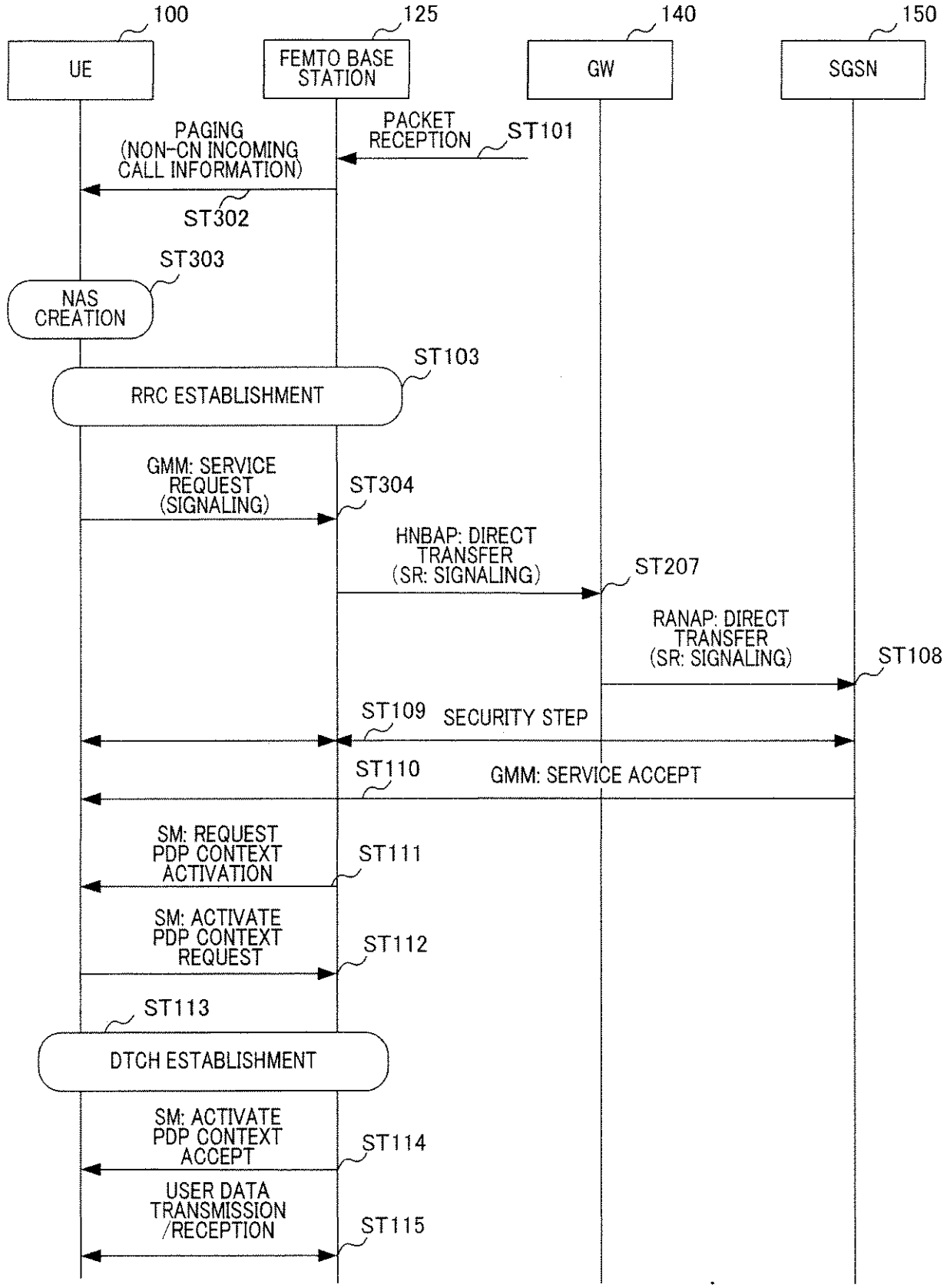

100
125
140
150
UE
FEMTO BASE STATION
GW
SGSN
PACKET RECEPTION
ST101
PAGING (NON-CN INCOMING CALL INFORMATION)
ST302
ST303
NAS CREATION
ST103
RRC ESTABLISHMENT
GMM: SERVICE REQUEST (SIGNALING)
ST304
HNBAP: DIRECT TRANSFER (SR: SIGNALING)
ST207
RANAP: DIRECT TRANSFER (SR: SIGNALING)
ST108
ST109
SECURITY STEP
ST110
GMM: SERVICE ACCEPT
SM: REQUEST PDP CONTEXT ACTIVATION
ST111
SM: ACTIVATE PDP CONTEXT REQUEST
ST112
ST113
DTCH ESTABLISHMENT
SM: ACTIVATE PDP CONTEXT ACCEPT
ST114
USER DATA TRANSMISSION /RECEPTION
ST115

FIG.15