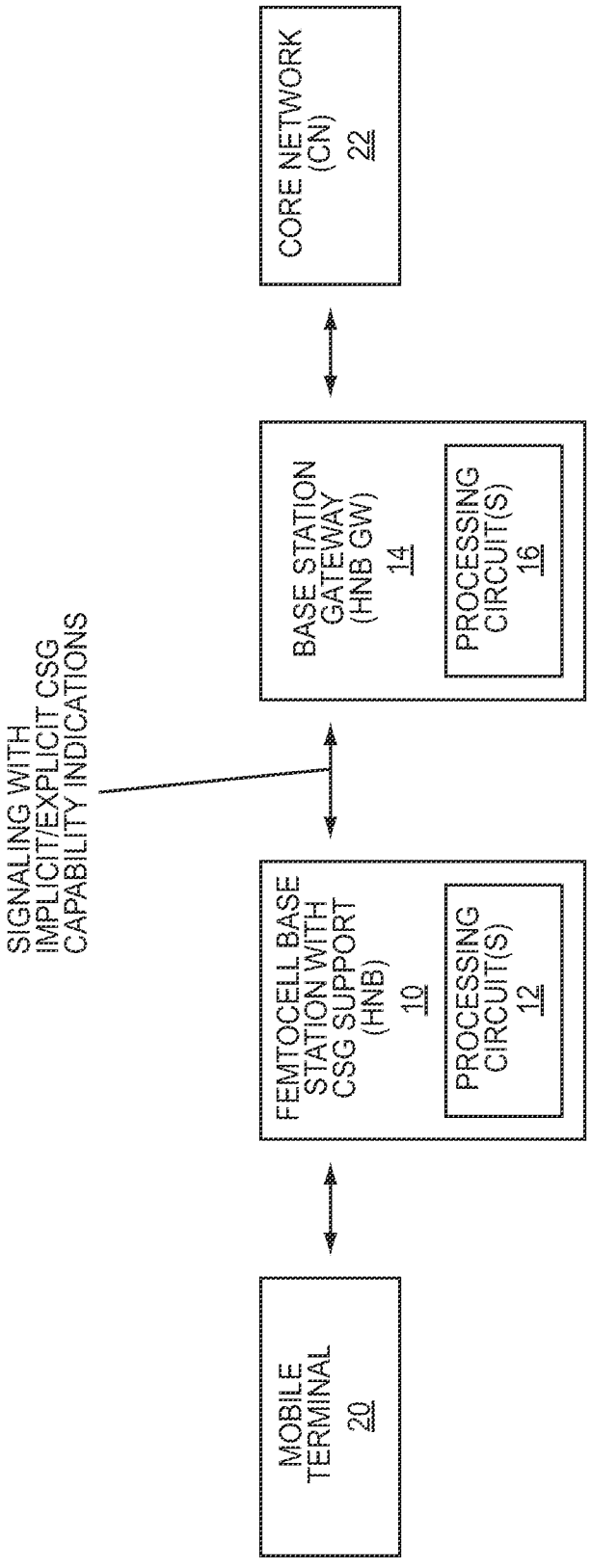

MOBILE TERMINAL 20
FEMTOCELL BASE STATION WITH CSG SUPPORT (HNB) 10
PROCESSING CIRCUIT(S) 12
SIGNALING WITH IMPLICIT/EXPLICIT CSG CAPABILITY INDICATIONS
BASE STATION GATEWAY (HNB GW) 14
PROCESSING CIRCUIT(S) 16
CORE NETWORK (CN) 22

FIG. 1

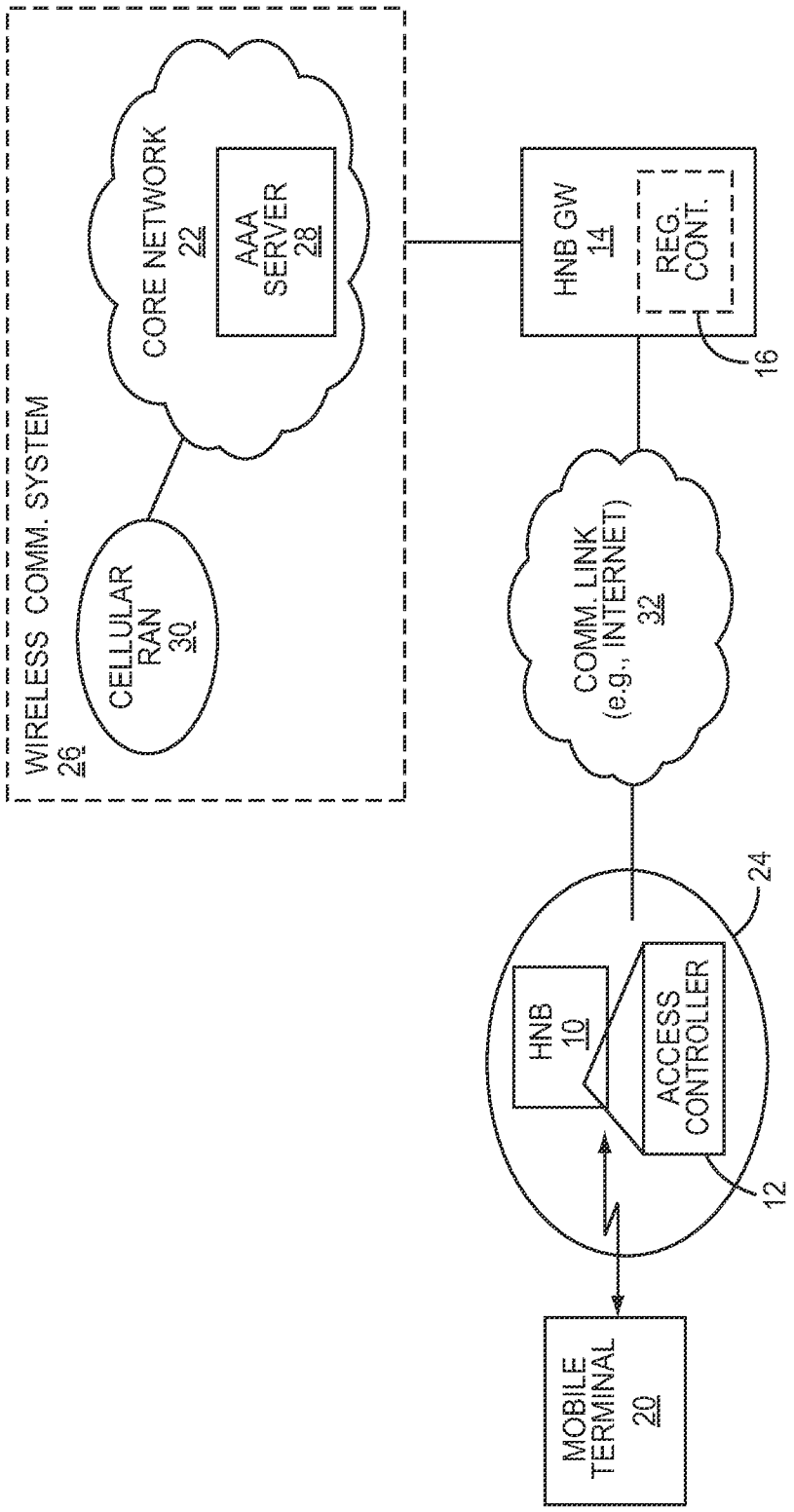

WIRELESS COMM. SYSTEM
26
CORE NETWORK
22
AAA SERVER
28
CELLULAR RAN
30
HNB GW
14
REG. CONT.
16
COMM. LINK
(e.g., INTERNET)
32
24
HNB
10
ACCESS CONTROLLER
12
MOBILE TERMINAL
20

FIG. 2

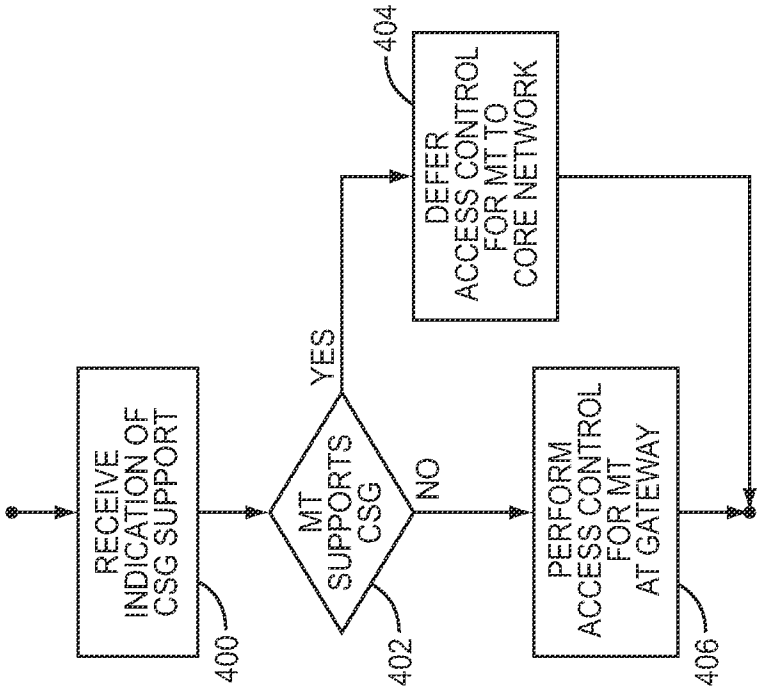

RECEIVE INDICATION OF CSG SUPPORT
400
MT SUPPORTS CSG
402
YES
NO
DEFER ACCESS CONTROL FOR MT TO CORE NETWORK
404
PERFORM ACCESS CONTROL FOR MT AT GATEWAY
406

FIG. 4

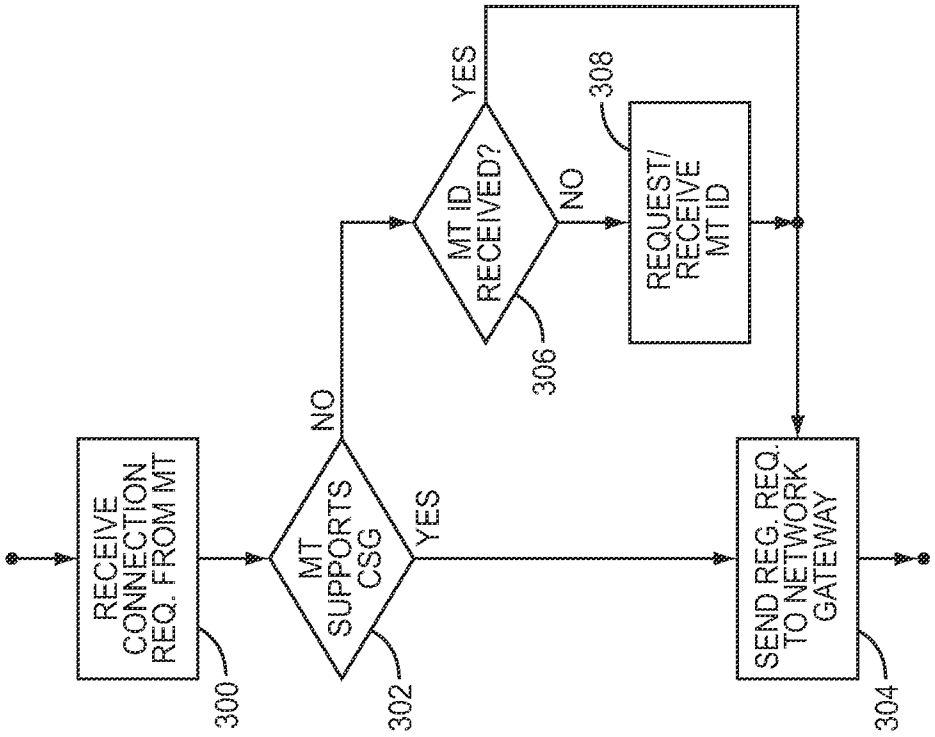

RECEIVE CONNECTION REQ. FROM MT
300
MT SUPPORTS CSG
302
NO
YES
MT ID RECEIVED?
306
YES
NO
REQUEST/ RECEIVE MT ID
308
SEND REG. REQ. TO NETWORK GATEWAY
304

FIG. 3

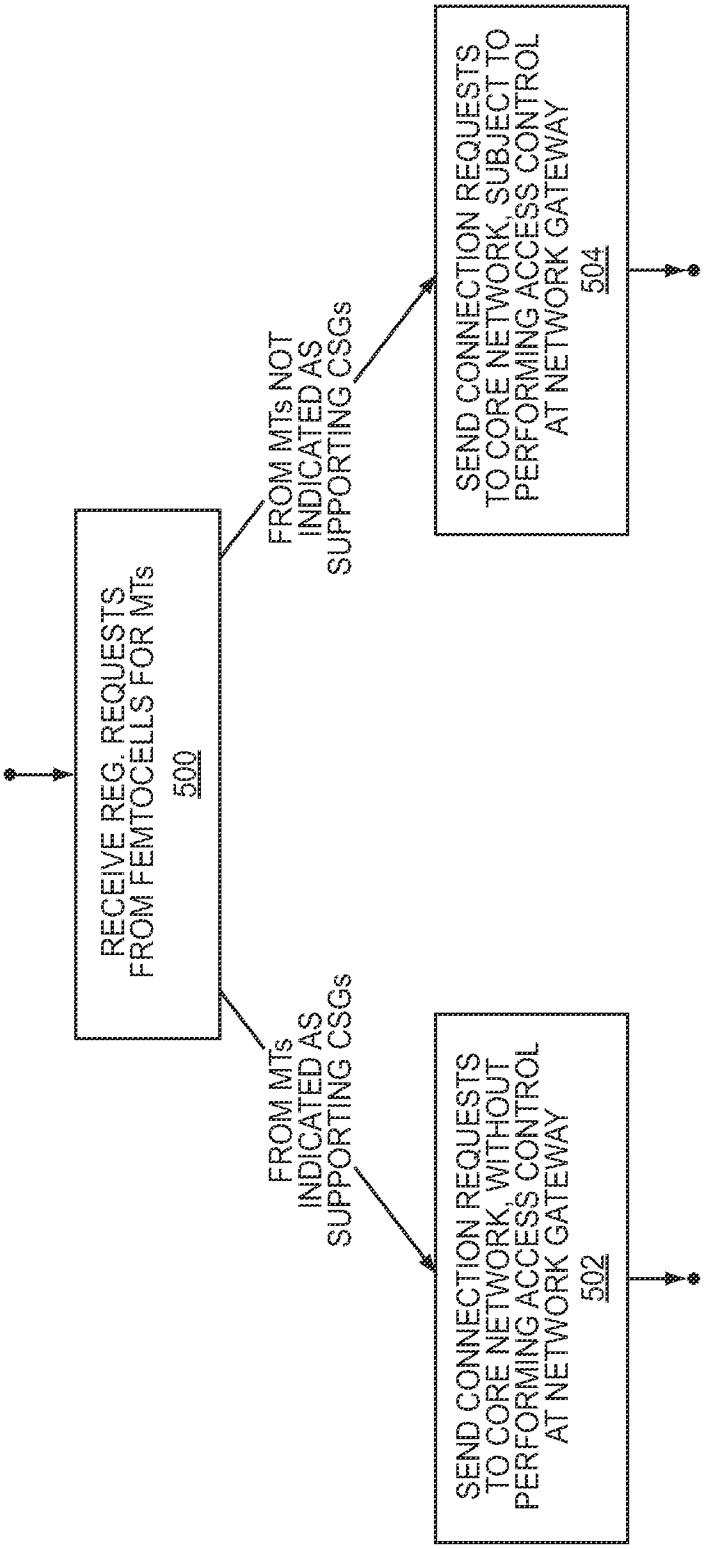

RECEIVE REG. REQUESTS FROM FEMTOCELLS FOR MTs
500
FROM MTs INDICATED AS SUPPORTING CSGs
FROM MTs NOT INDICATED AS SUPPORTING CSGs
SEND CONNECTION REQUESTS TO CORE NETWORK, WITHOUT PERFORMING ACCESS CONTROL AT NETWORK GATEWAY
502
SEND CONNECTION REQUESTS TO CORE NETWORK, SUBJECT TO PERFORMING ACCESS CONTROL AT NETWORK GATEWAY
504

FIG. 5

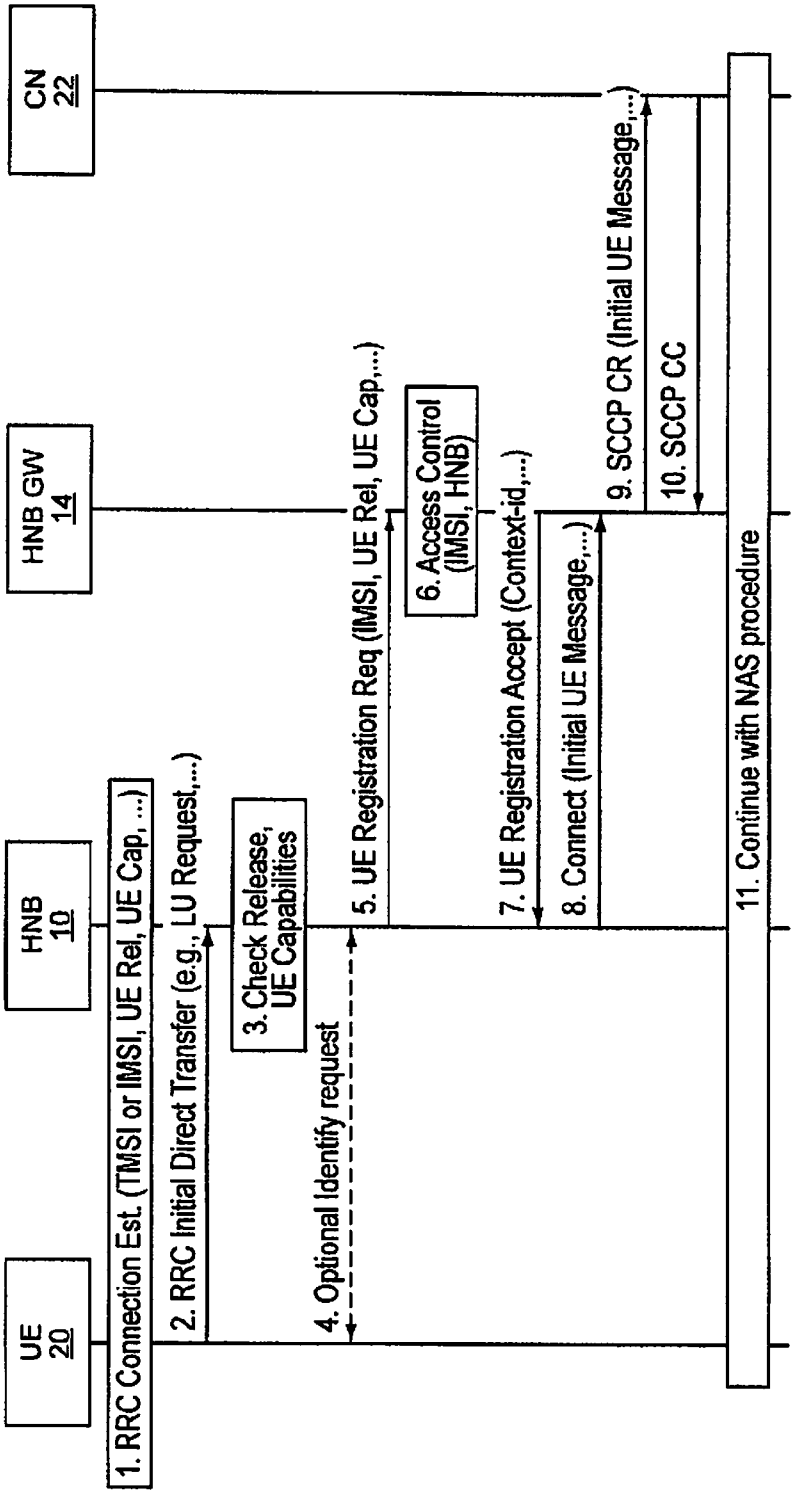

UE 20
HNB 10
HNB GW 14
CN 22
1. RRC Connection Est. (TMSI or IMSI, UE Rel, UE Cap, ...)
2. RRC Initial Direct Transfer (e.g., LU Request,...)
3. Check Release, UE Capabilities
4. Optional Identify request
5. UE Registration Req (IMSI, UE Rel, UE Cap,...)
6. Access Control (IMSI, HNB)
7. UE Registration Accept (Context-id,...)
8. Connect (Initial UE Message,...)
9. SCCP CR (Initial UE Message,...)
10. SCCP CC
11. Continue with NAS procedure

FIG. 6

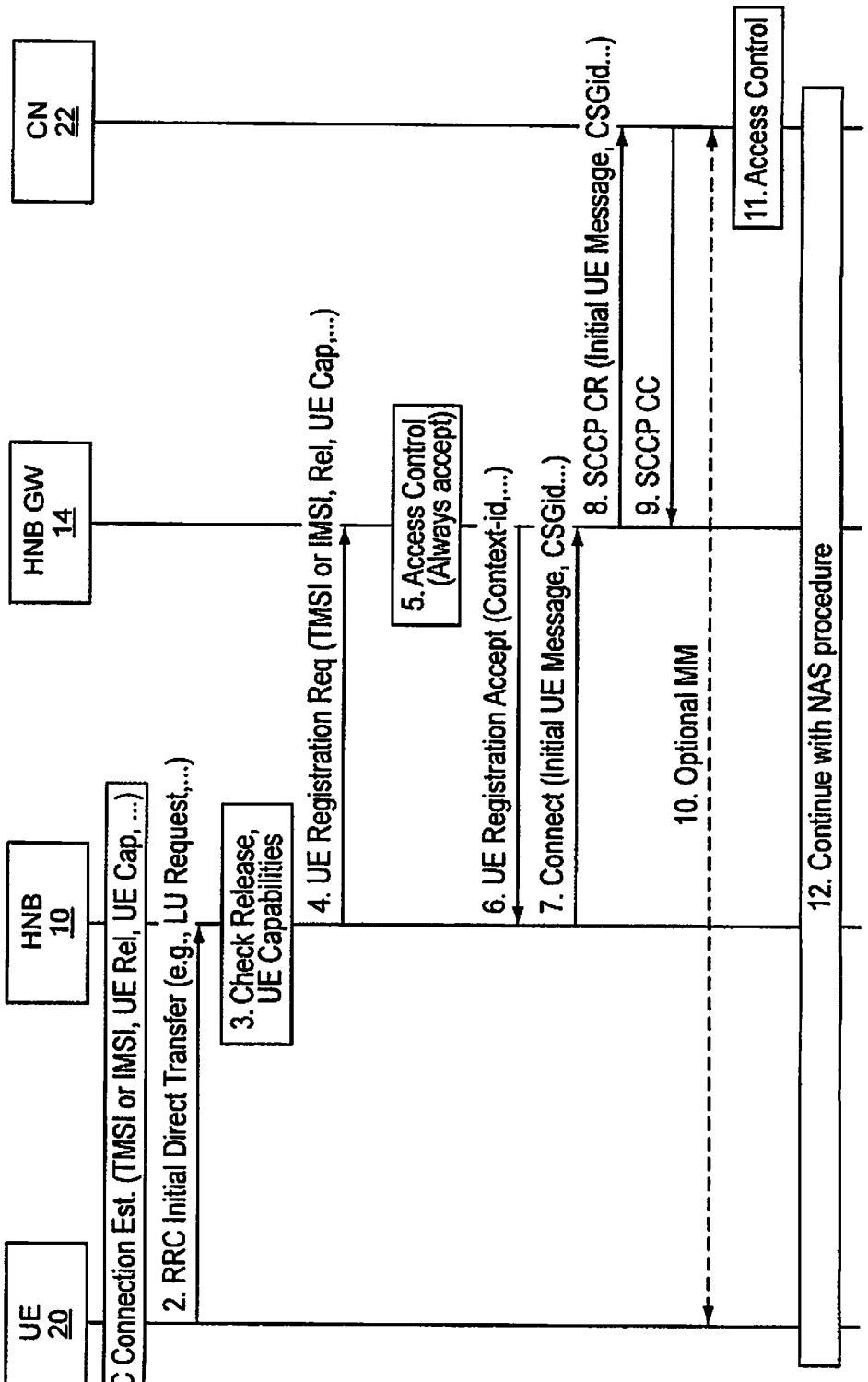

UE 20
HNB 10
HNB GW 14
CN 22
1. RRC Connection Est. (TMSI or IMSI, UE Rel, UE Cap, ...)
2. RRC Initial Direct Transfer (e.g., LU Request,...)
3. Check Release, UE Capabilities
4. UE Registration Req (TMSI or IMSI, Rel, UE Cap,...)
5. Access Control (Always accept)
6. UE Registration Accept (Context-id,...)
7. Connect (Initial UE Message, CSGid...)
8. SCCP CR (Initial UE Message, CSGid...)
9. SCCP CC
10. Optional MM
11. Access Control
12. Continue with NAS procedure

FIG. 7

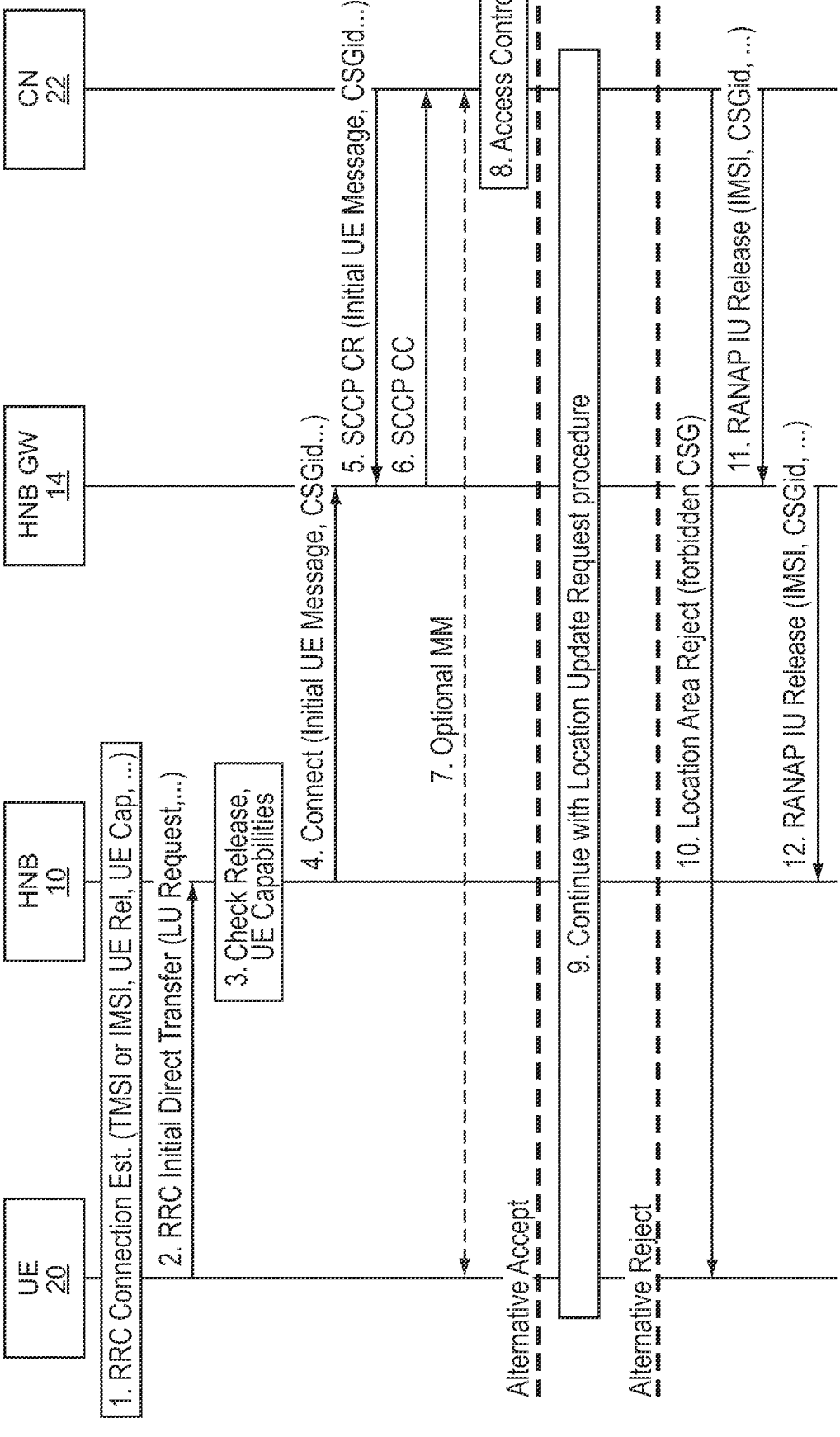

UE 20
HNB 10
HNB GW 14
CN 22
1. RRC Connection Est. (TMSI or IMSI, UE Rel, UE Cap, ...)
2. RRC Initial Direct Transfer (LU Request,...)
3. Check Release, UE Capabilities
4. Connect (Initial UE Message, CSGid...)
5. SCCP CR (Initial UE Message, CSGid...)
6. SCCP CC
7. Optional MM
8. Access Control
Alternative Accept
9. Continue with Location Update Request procedure
Alternative Reject
10. Location Area Reject (forbidden CSG)
11. RANAP IU Release (IMSI, CSGid, ...)
12. RANAP IU Release (IMSI, CSGid, ...)

FIG. 8