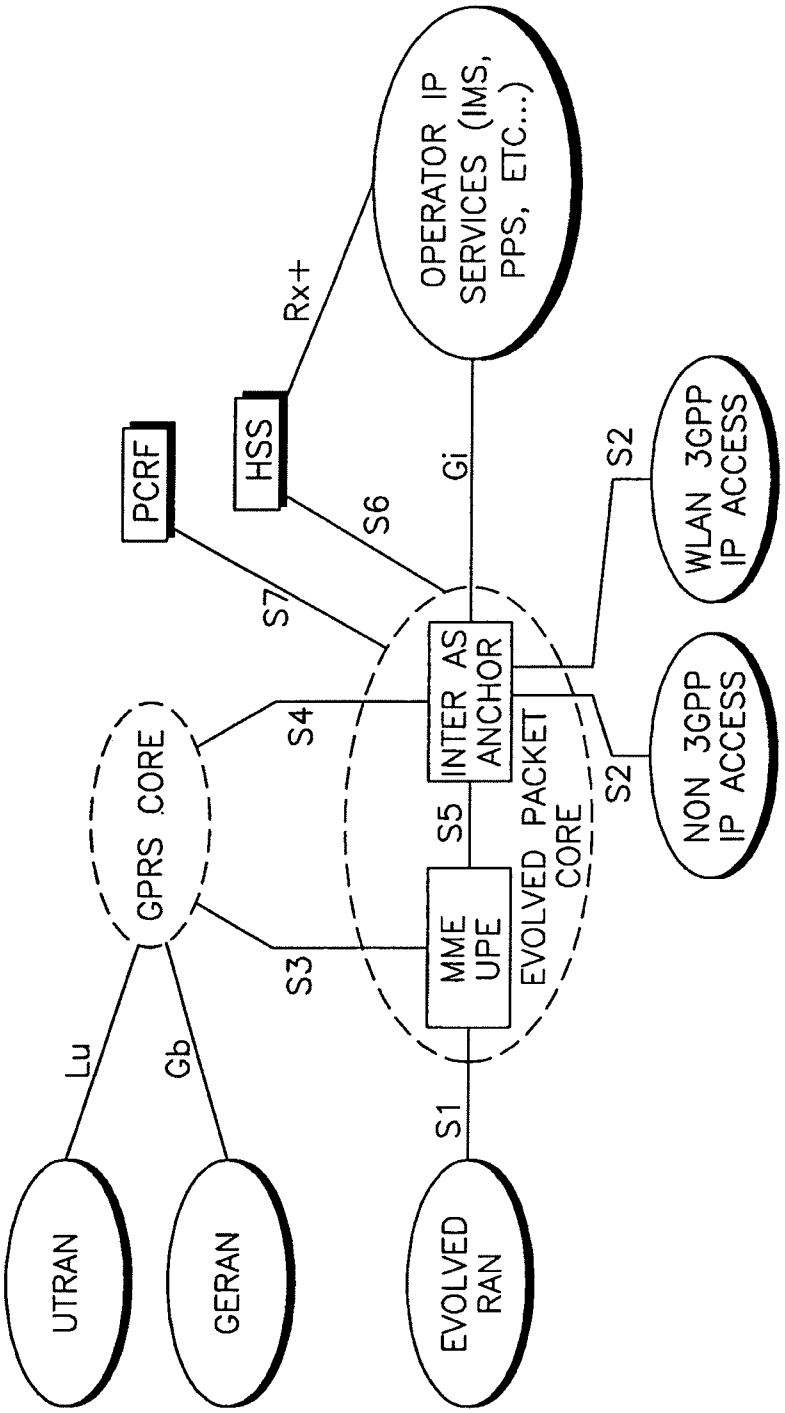

100
OPERATOR IP SERVICES (IMS, PPS, ETC...)
Rx+
HSS
PCRF
S6
Gi
S7
S2
WLAN 3GPP IP ACCESS
INTER AS ANCHOR
S4
S5
S2
NON 3GPP IP ACCESS
GPRS CORE
EVOLVED PACKET CORE
MME UPE
S3
Lu
Gb
S1
UTRAN
GERAN
EVOLVED RAN

FIG.1

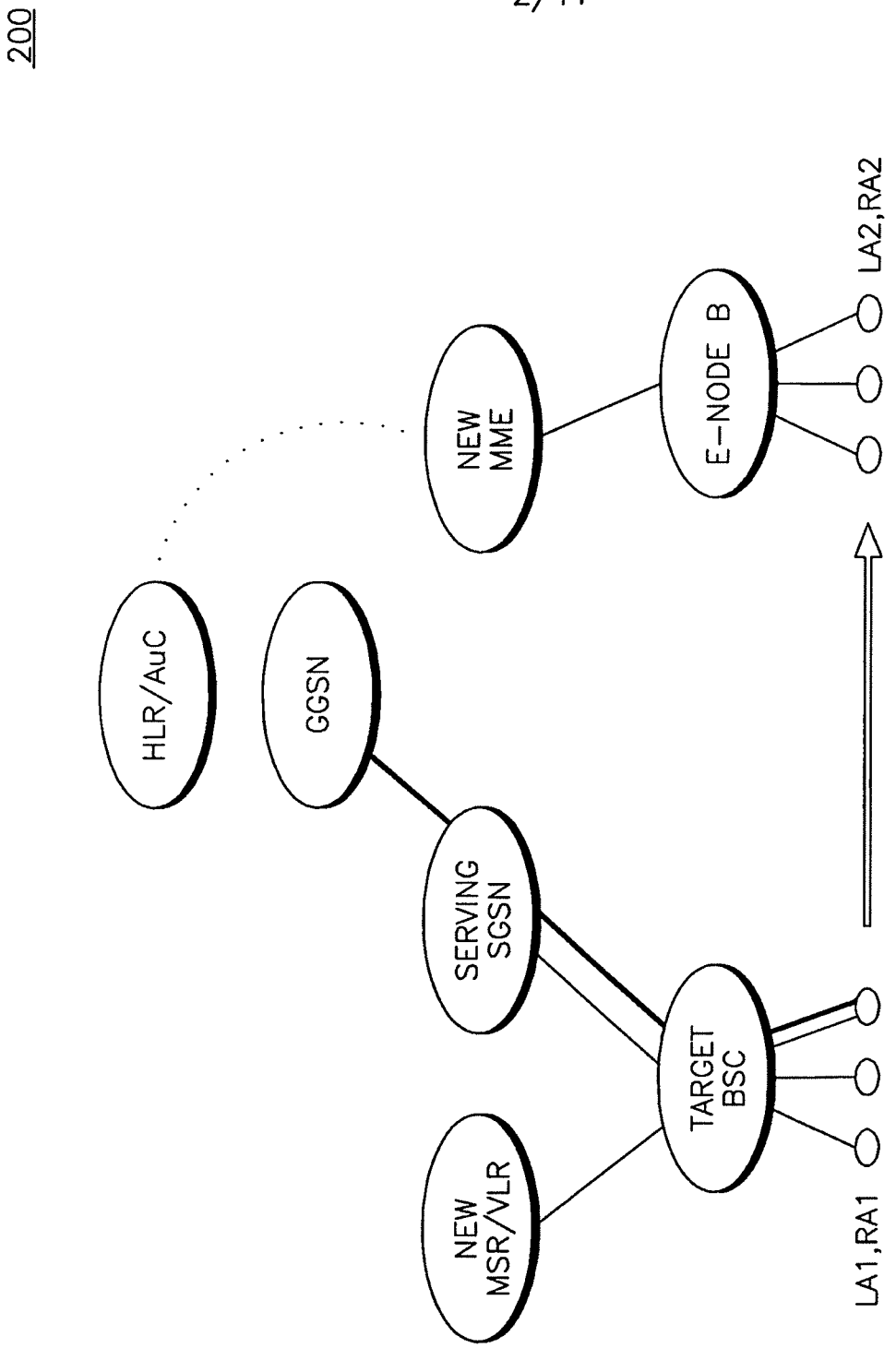

200
HLR/AuC
GGSN
SERVING SGSN
NEW MSR/VLR
NEW MME
E-NODE B
TARGET BSC
LA1,RA1
LA2,RA2

FIG.2

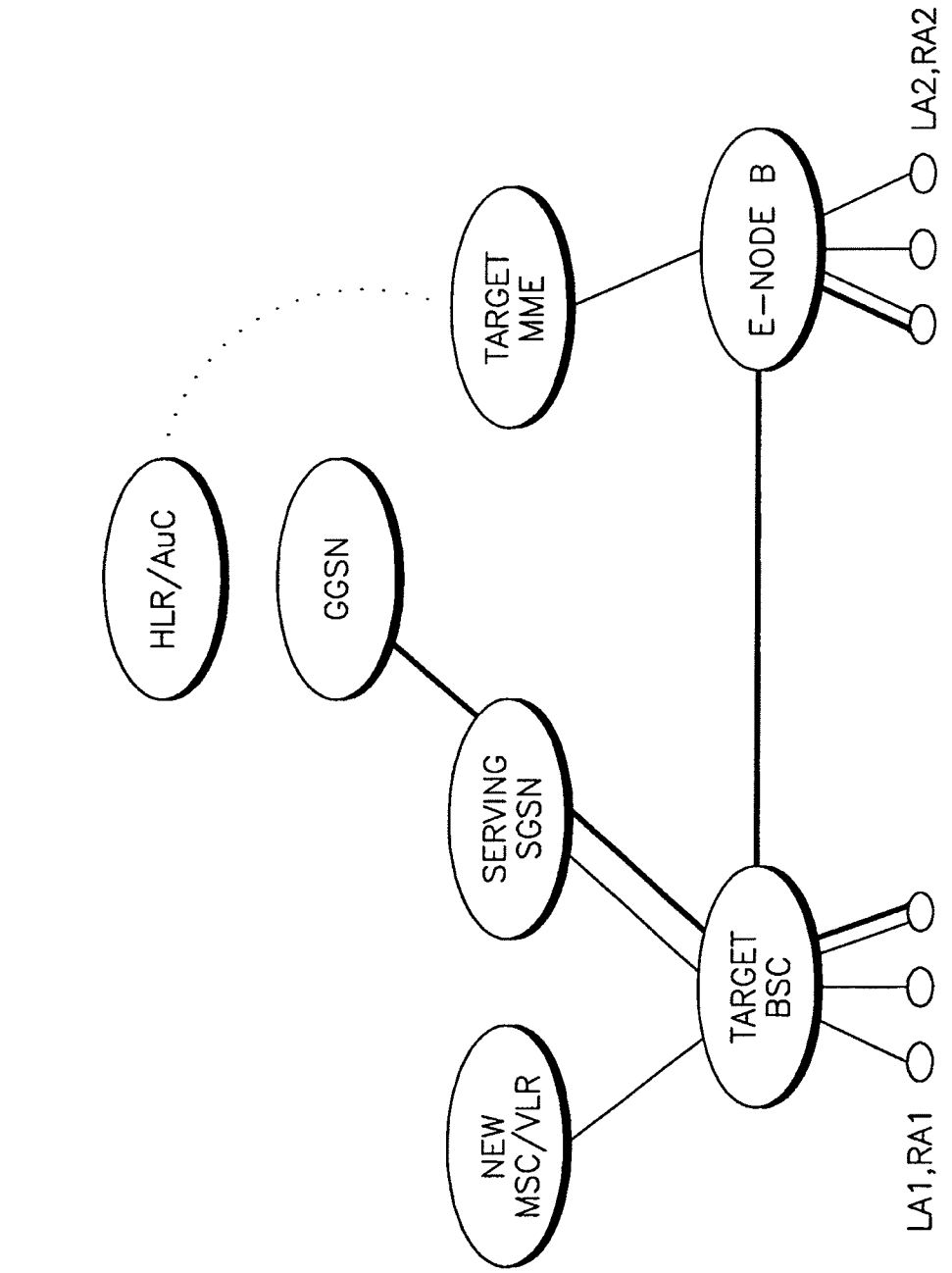

300
HLR/AuC
GGSN
SERVING SGSN
NEW MSC/VLR
TARGET MME
TARGET BSC
E-NODE B
LA1,RA1
LA2,RA2

FIG.3

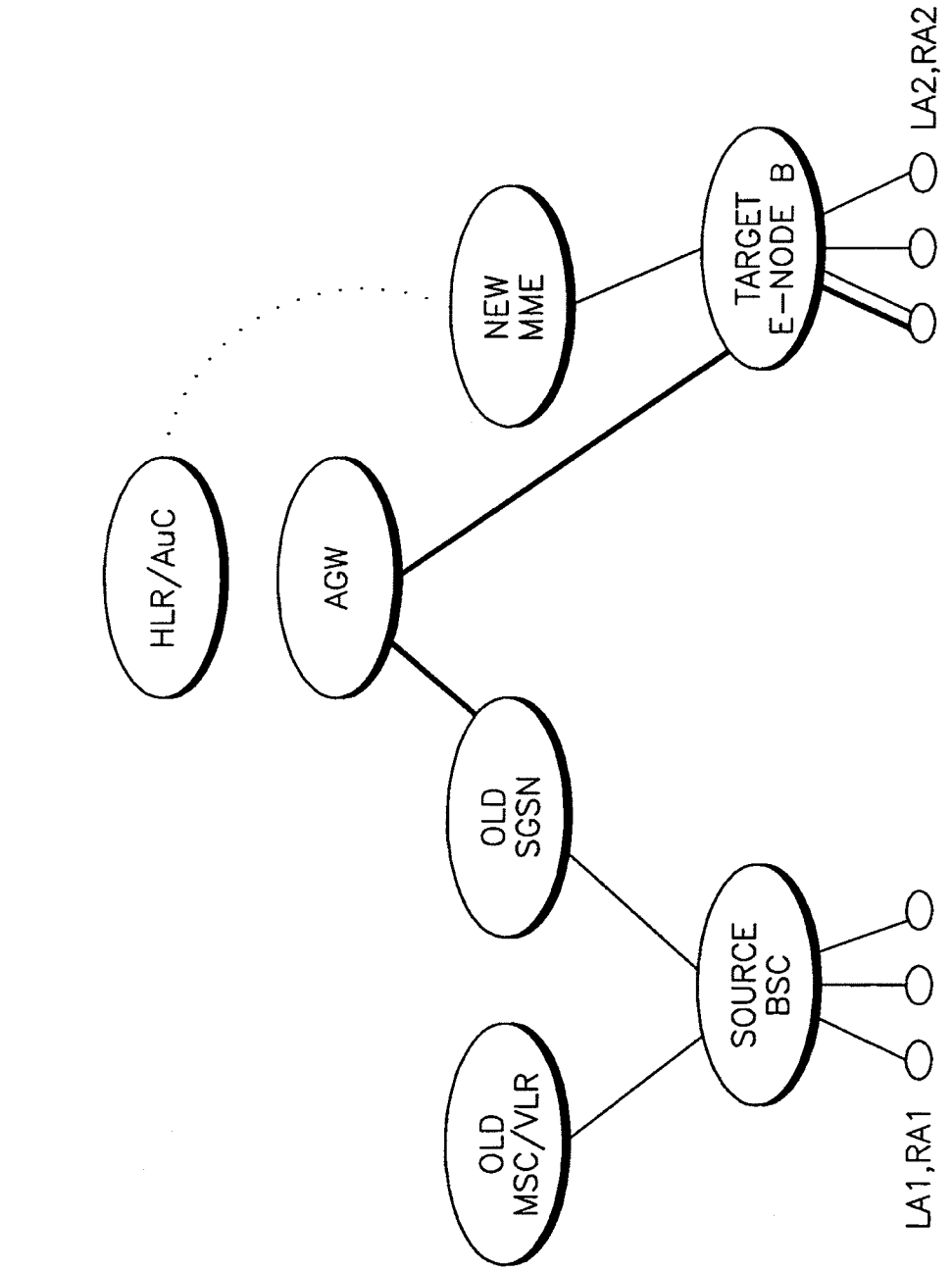

400
HLR/AuC
AGW
NEW MME
TARGET E-NODE B
LA2,RA2
OLD SGSN
OLD MSC/VLR
SOURCE BSC
LA1,RA1

FIG.4

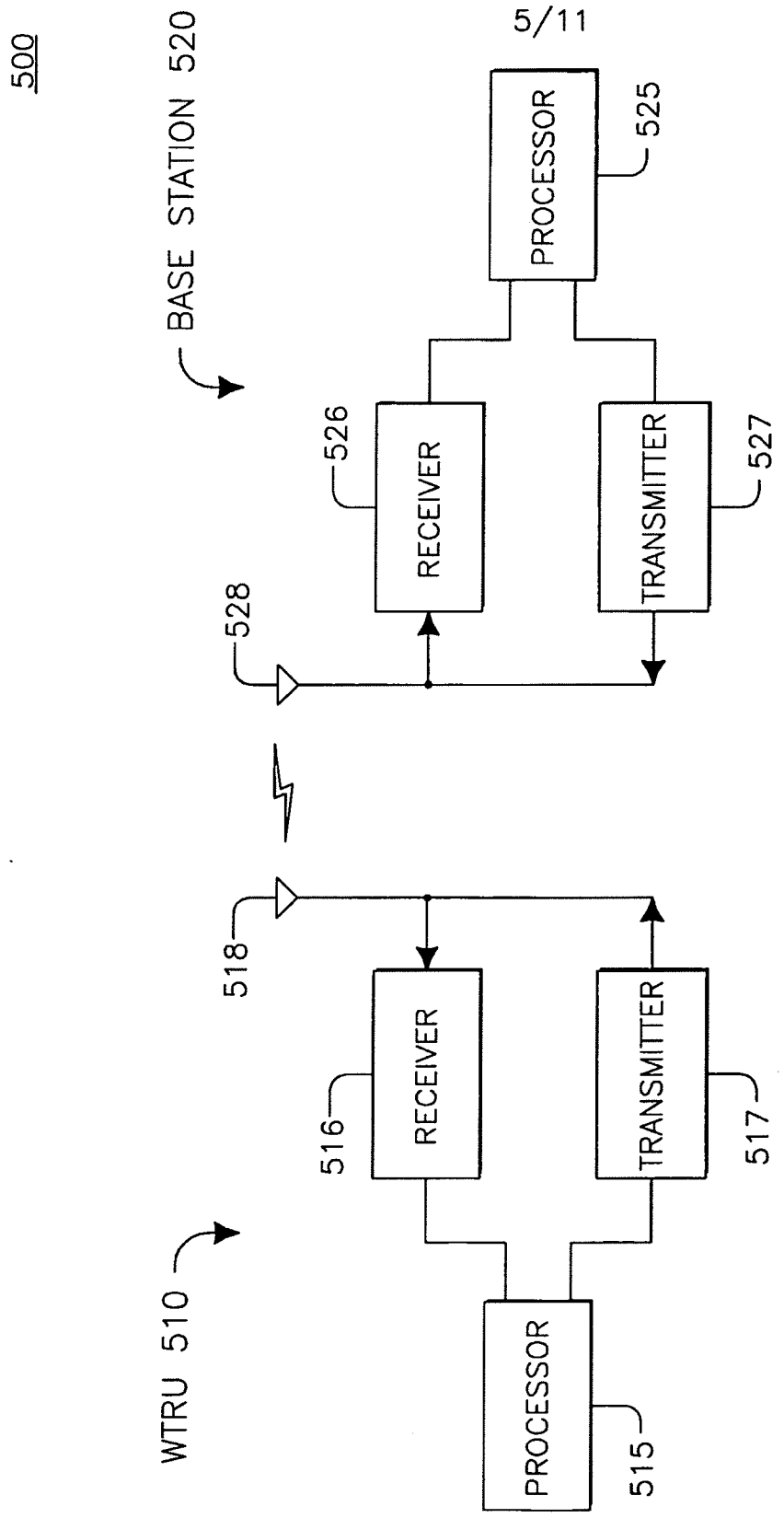

500
BASE STATION 520
PROCESSOR
525
RECEIVER
526
TRANSMITTER
527
528
518
RECEIVER
516
TRANSMITTER
517
WTRU 510
PROCESSOR
515

FIG.5

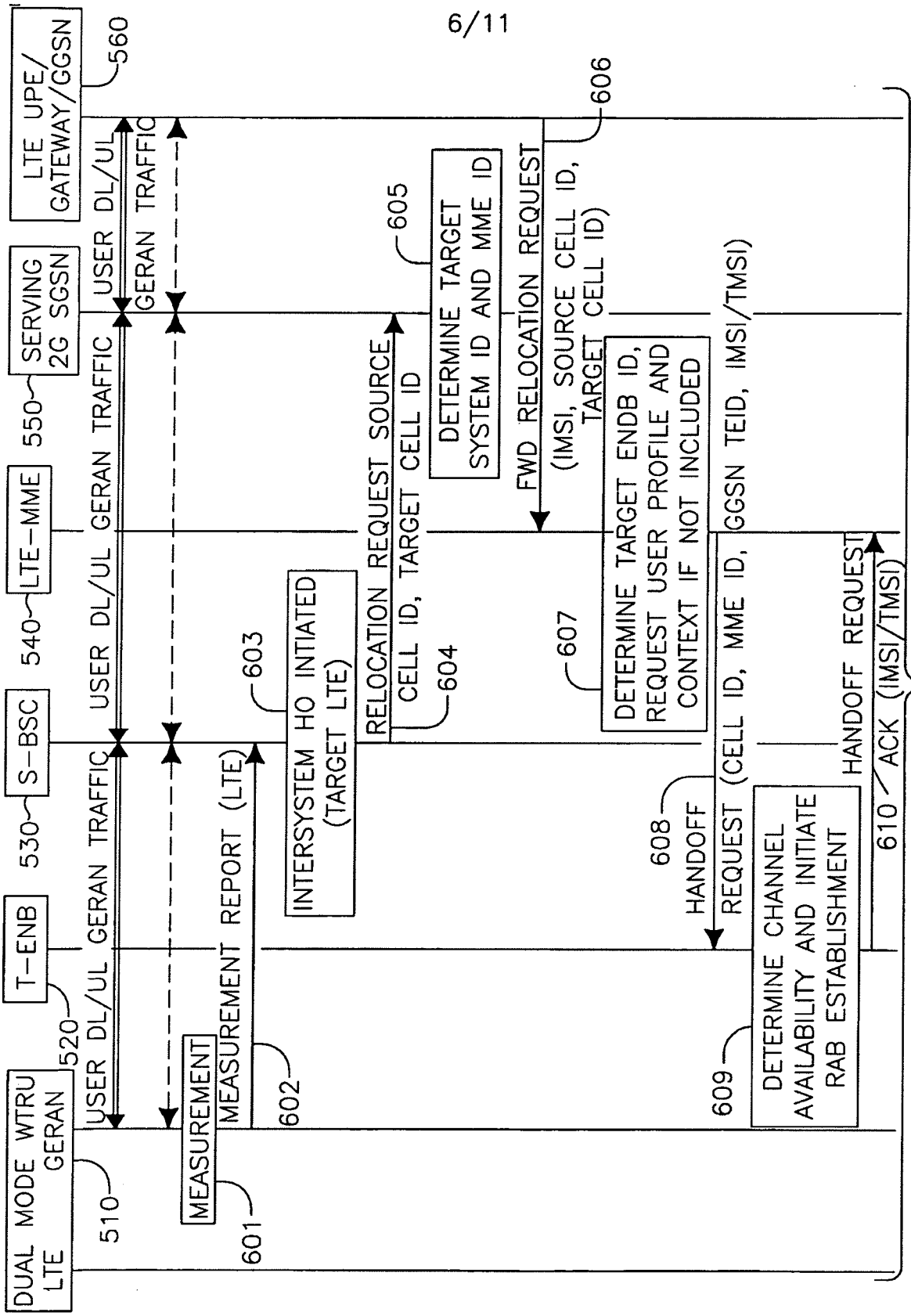

DUAL MODE WTRU LTE GERAN
510
T-ENB
520
S-BSC
530
LTE-MME
540
SERVING 2G SGSN
550
LTE UPE/ GATEWAY/GGSN
560
USER DL/UL GERAN TRAFFIC
USER DL/UL GERAN TRAFFIC
USER DL/UL GERAN TRAFFIC
MEASUREMENT
601
MEASUREMENT REPORT (LTE)
602
INTERSYSTEM HO INTIATED (TARGET LTE)
603
RELOCATION REQUEST SOURCE CELL ID, TARGET CELL ID
604
DETERMINE TARGET SYSTEM ID AND MME ID
605
FWD RELOCATION REQUEST (IMSI, SOURCE CELL ID, TARGET CELL ID)
606
DETERMINE TARGET ENDB ID, REQUEST USER PROFILE AND CONTEXT IF NOT INCLUDED
607
608 HANDOFF REQUEST (CELL ID, MME ID, GGSN TEID, IMSI/TMSI)
609
DETERMINE CHANNEL AVAILABILITY AND INITIATE RAB ESTABLISHMENT
HANDOFF REQUEST ACK (IMSI/TMSI)
610
TO FIG. 6B

FIG.6A

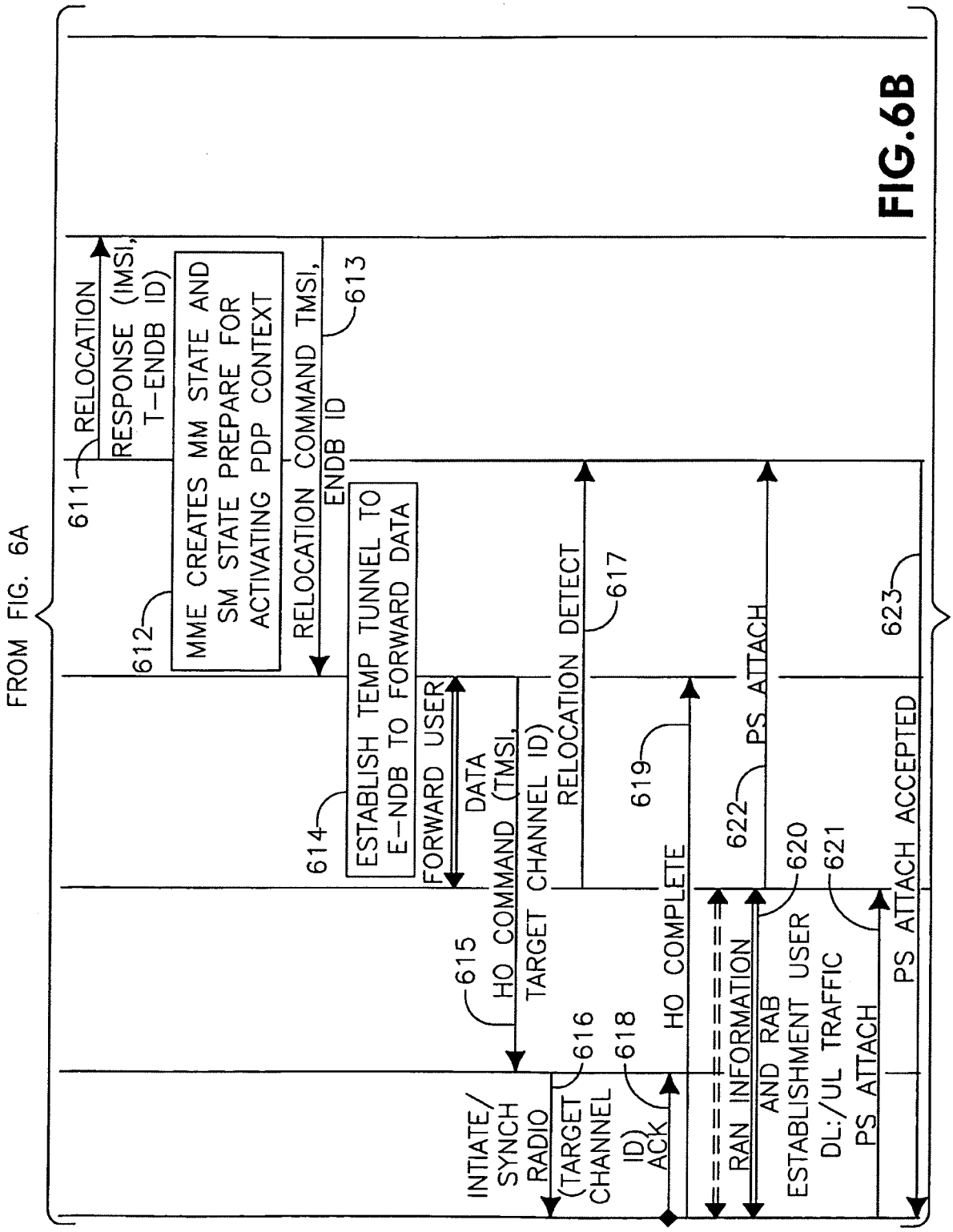

FROM FIG. 6A
TO FIG. 6C
611
RELOCATION RESPONSE (IMSI, T-ENDB ID)
612
MME CREATES MM STATE AND SM STATE PREPARE FOR ACTIVATING PDP CONTEXT
613
RELOCATION COMMAND TMSI, ENDB ID
614
ESTABLISH TEMP TUNNEL TO E-NDB TO FORWARD DATA
FORWARD USER DATA
615
HO COMMAND (TMSI, TARGET CHANNEL ID)
616
INTIATE/ SYNCH RADIO (TARGET CHANNEL ID)
617
RELOCATION DETECT
618
ACK
619
HO COMPLETE
620
RAN INFORMATION AND RAB ESTABLISHMENT USER DL:/UL TRAFFIC
621
PS ATTACH
622
PS ATTACH
623
PS ATTACH ACCEPTED

FIG.6B

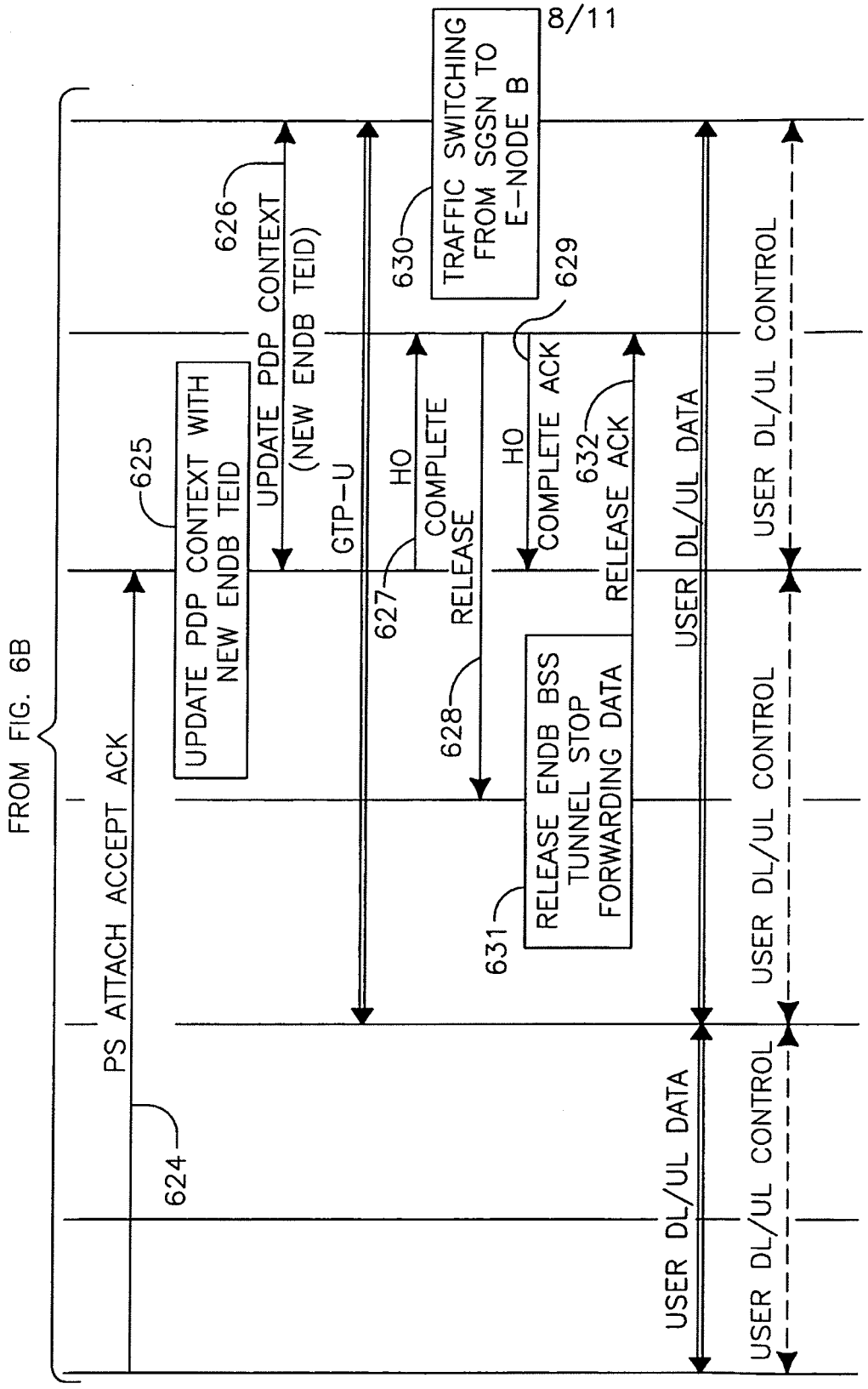

FROM FIG. 6B
PS ATTACH ACCEPT ACK
624
UPDATE PDP CONTEXT WITH NEW ENDB TEID
625
UPDATE PDP CONTEXT (NEW ENDB TEID)
626
GTP-U
627
HO COMPLETE
RELEASE
628
RELEASE ENDB BSS TUNNEL STOP FORWARDING DATA
631
TRAFFIC SWITCHING FROM SGSN TO E-NODE B
630
HO COMPLETE ACK
629
RELEASE ACK
632
USER DL/UL DATA
USER DL/UL DATA
USER DL/UL CONTROL
USER DL/UL CONTROL
USER DL/UL CONTROL
USER DL/UL CONTROL

FIG.6C

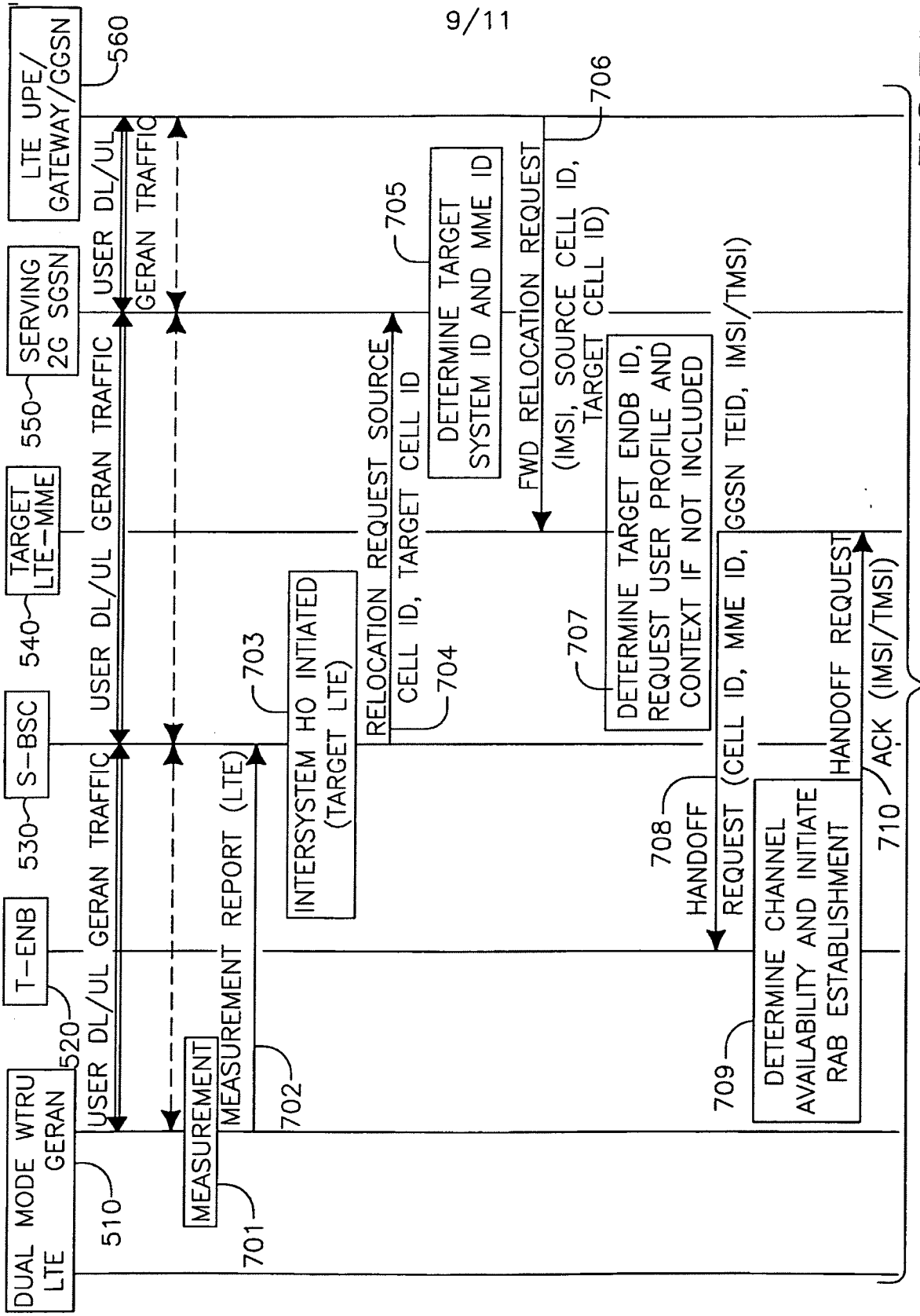

DUAL MODE WTRU LTE
510
GERAN
T-ENB
520
S-BSC
530
TARGET LTE-MME
540
SERVING 2G SGSN
550
LTE UPE/ GATEWAY/GGSN
560
USER DL/UL GERAN TRAFFIC
USER DL/UL GERAN TRAFFIC
USER DL/UL GERAN TRAFFIC
GERAN TRAFFIC
MEASUREMENT
701
MEASUREMENT REPORT (LTE)
702
INTERSYSTEM HO INITIATED (TARGET LTE)
703
RELOCATION REQUEST SOURCE CELL ID, TARGET CELL ID
704
DETERMINE TARGET SYSTEM ID AND MME ID
705
FWD RELOCATION REQUEST (IMSI, SOURCE CELL ID, TARGET CELL ID)
706
DETERMINE TARGET ENDB ID, REQUEST USER PROFILE AND CONTEXT IF NOT INCLUDED
707
HANDOFF REQUEST (CELL ID, MME ID, GGSN TEID, IMSI/TMSI)
708
DETERMINE CHANNEL AVAILABILITY AND INITIATE RAB ESTABLISHMENT
709
HANDOFF REQUEST ACK (IMSI/TMSI)
710
TO FIG. 7B

FIG.7A

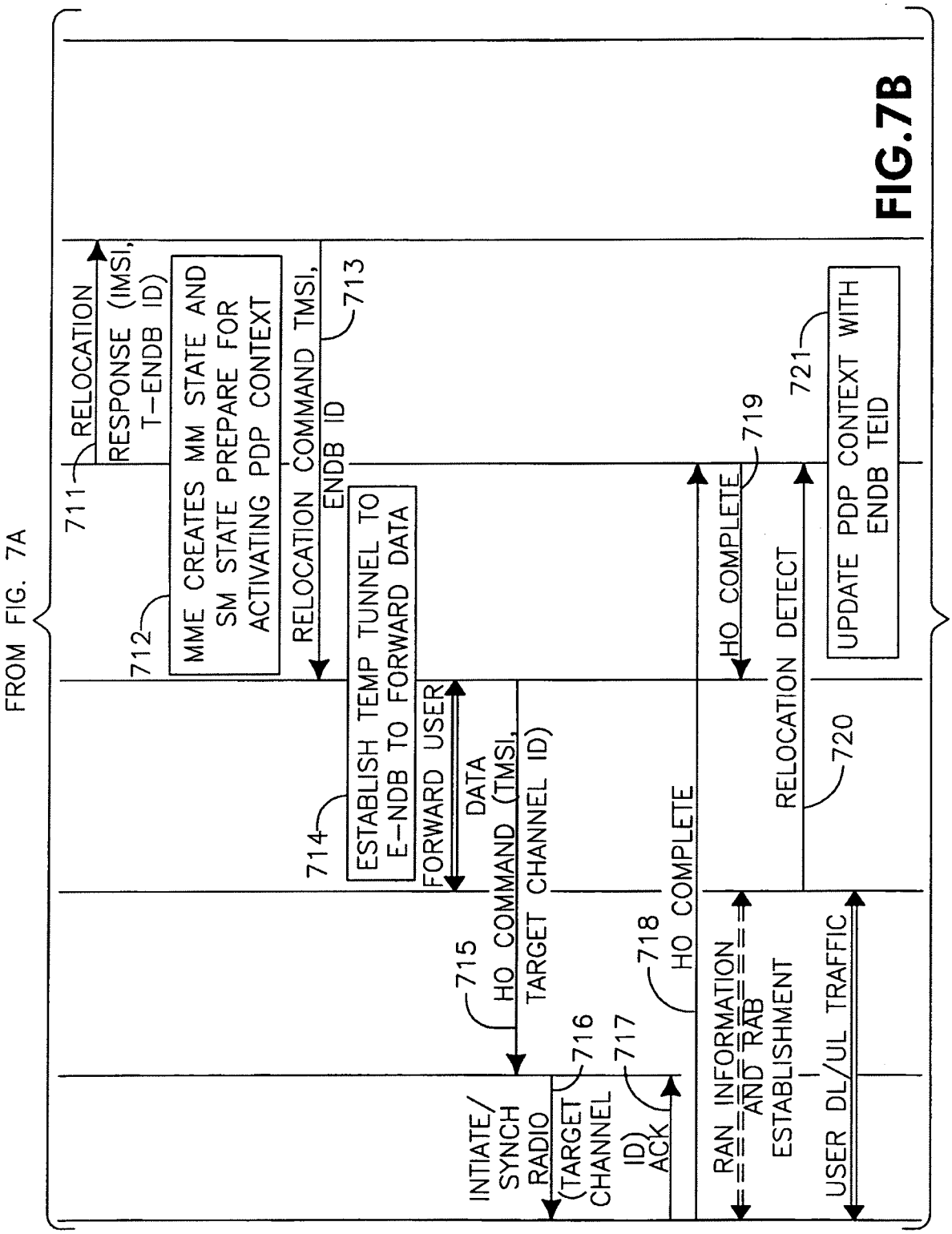

FROM FIG. 7A
TO FIG. 7C
711
RELOCATION RESPONSE (IMSI, T-ENDB ID)
712
MME CREATES MM STATE AND SM STATE PREPARE FOR ACTIVATING PDP CONTEXT
713
RELOCATION COMMAND TMSI, ENDB ID
714
ESTABLISH TEMP TUNNEL TO E-NDB TO FORWARD DATA
FORWARD USER DATA
715
HO COMMAND (TMSI, TARGET CHANNEL ID)
716
INTIATE/ SYNCH RADIO (TARGET CHANNEL ID)
717
ACK
718
HO COMPLETE
719
HO COMPLETE
720
RELOCATION DETECT
721
UPDATE PDP CONTEXT WITH ENDB TEID
RAN INFORMATION AND RAB ESTABLISHMENT
USER DL/UL TRAFFIC

FIG.7B

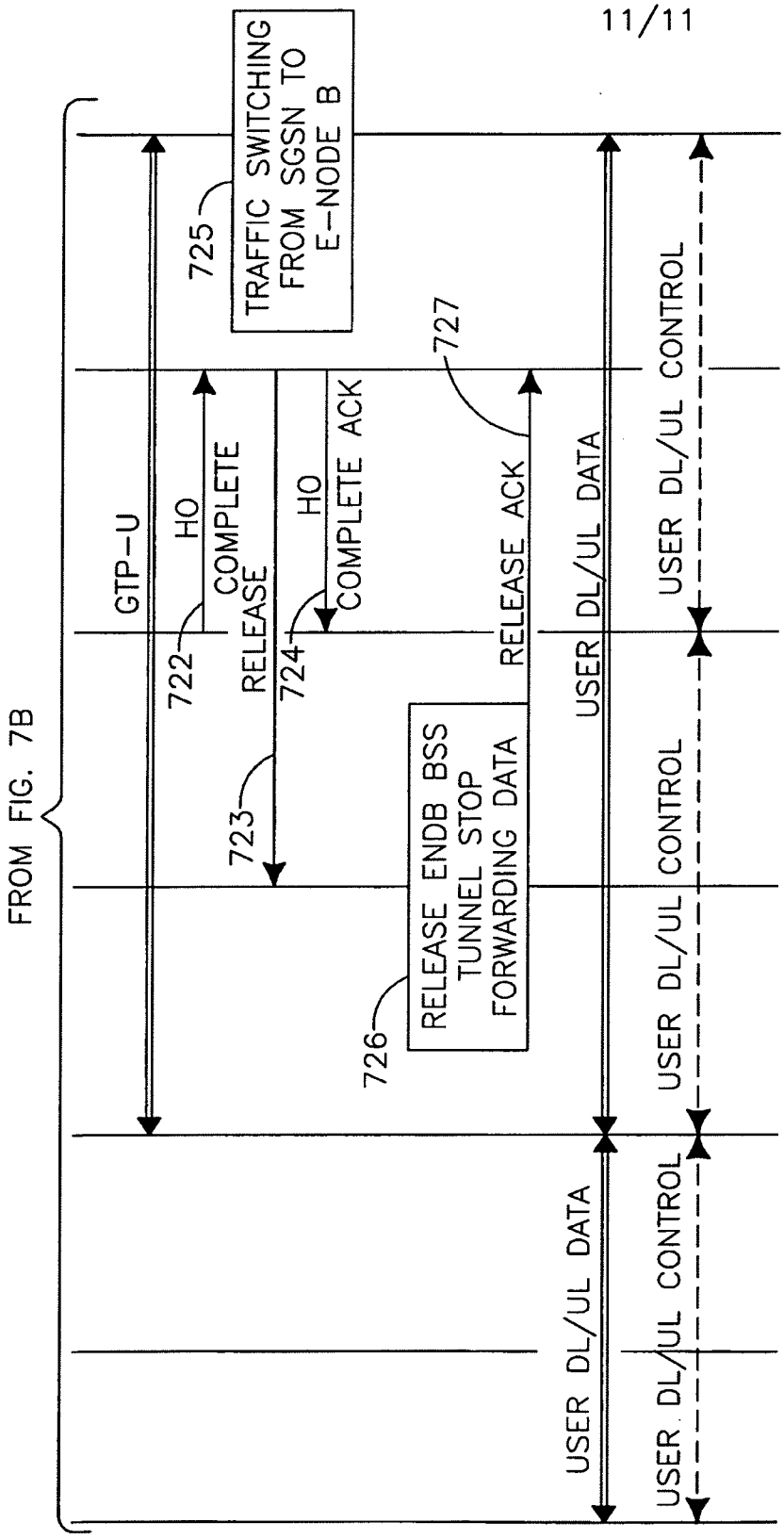

FROM FIG. 7B
GTP-U
HO COMPLETE
RELEASE
722
723
HO COMPLETE ACK
724
725
TRAFFIC SWITCHING FROM SGSN TO E-NODE B
726
RELEASE ENDB BSS TUNNEL STOP FORWARDING DATA
727
RELEASE ACK
USER DL/UL DATA
USER DL/UL CONTROL
USER DL/UL DATA
USER DL/UL CONTROL
USER DL/UL DATA
USER DL/UL CONTROL

FIG.7C