

FIG.1A
PRIOR ART

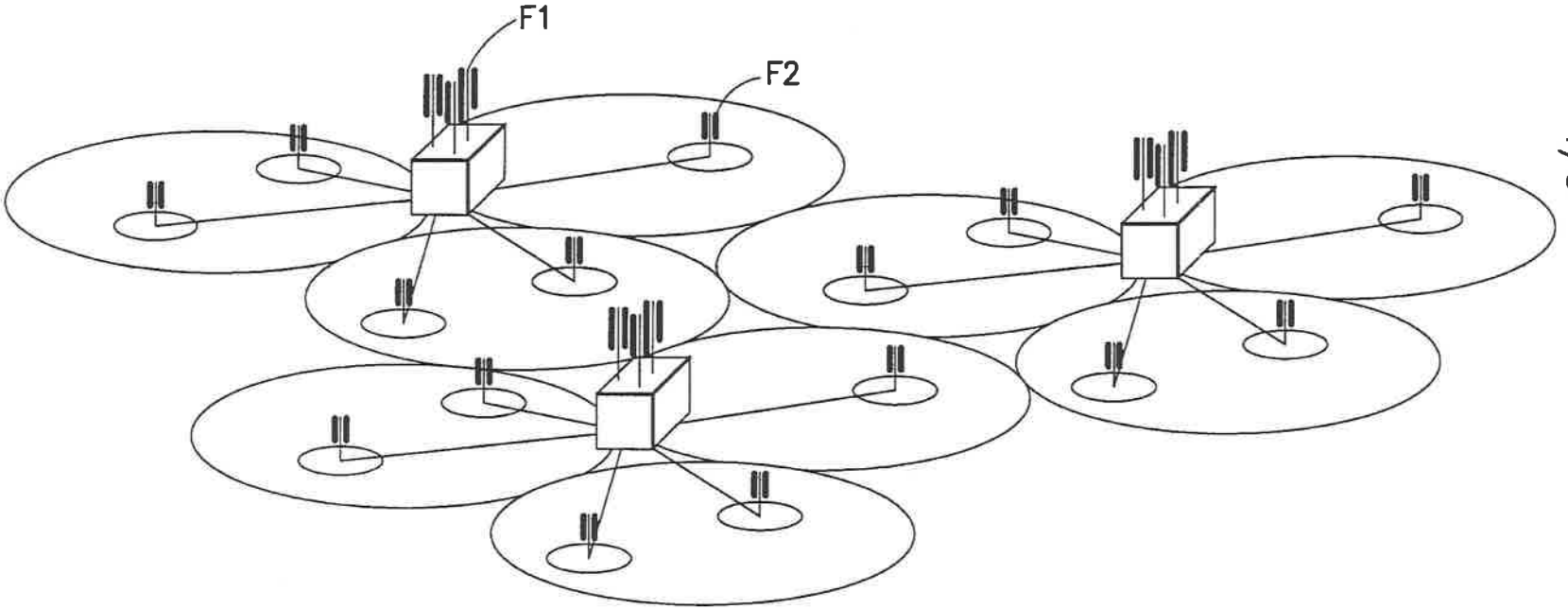


FIG.1B
PRIOR ART

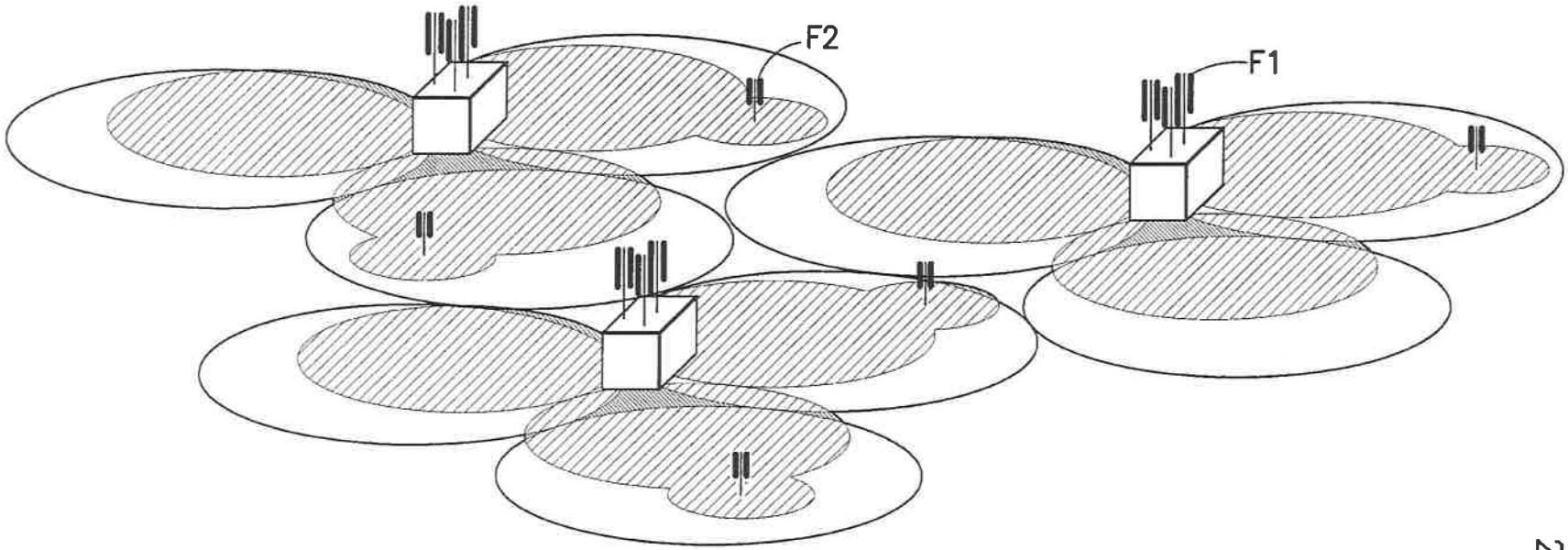


FIG.1C
PRIOR ART

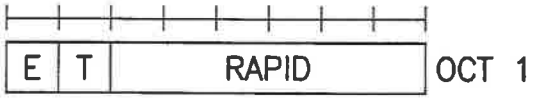


FIG.2A
PRIOR ART

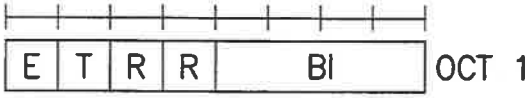


FIG.2B
PRIOR ART

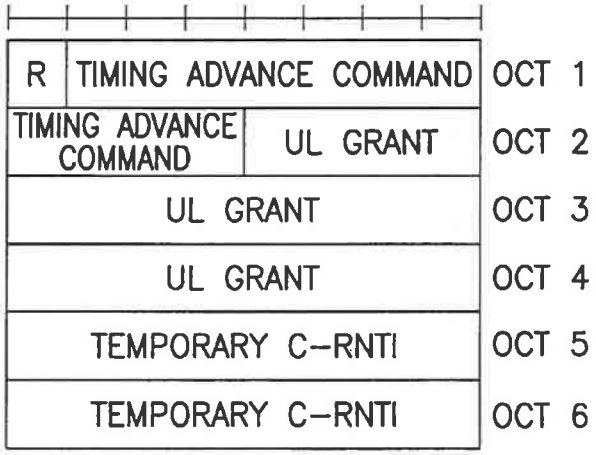


FIG.2C
PRIOR ART

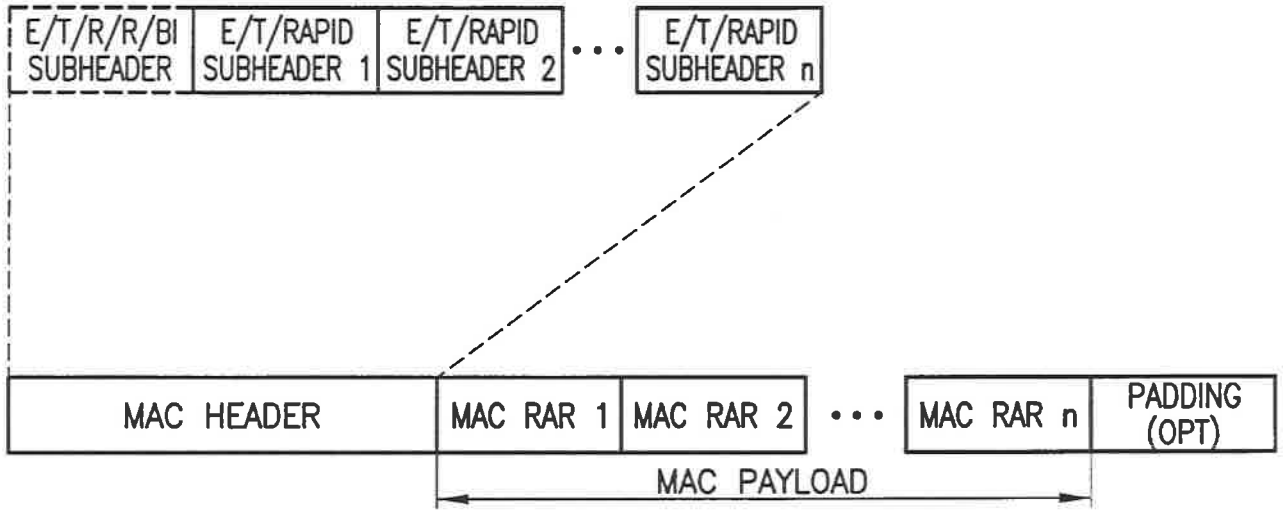


FIG.2D
PRIOR ART

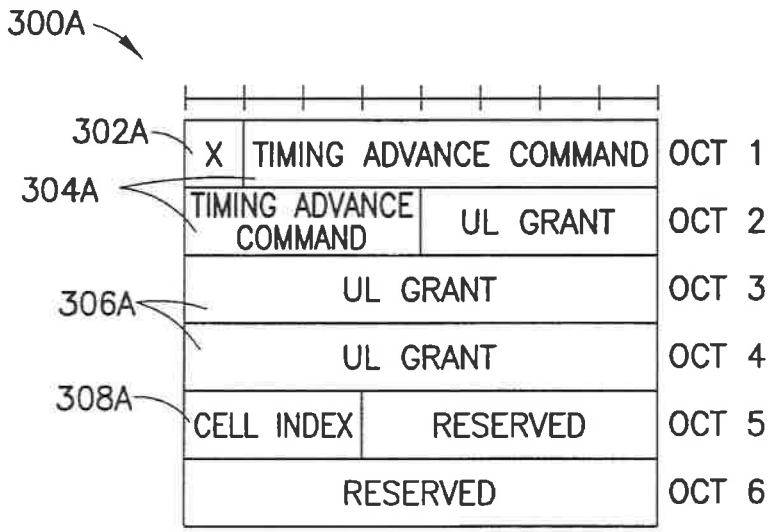


FIG.3A

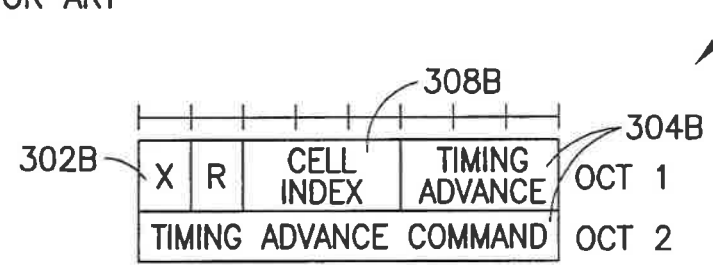


FIG.3B

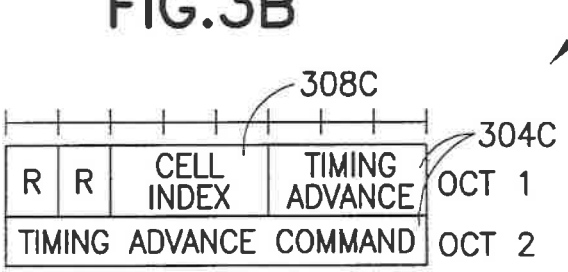


FIG.3C

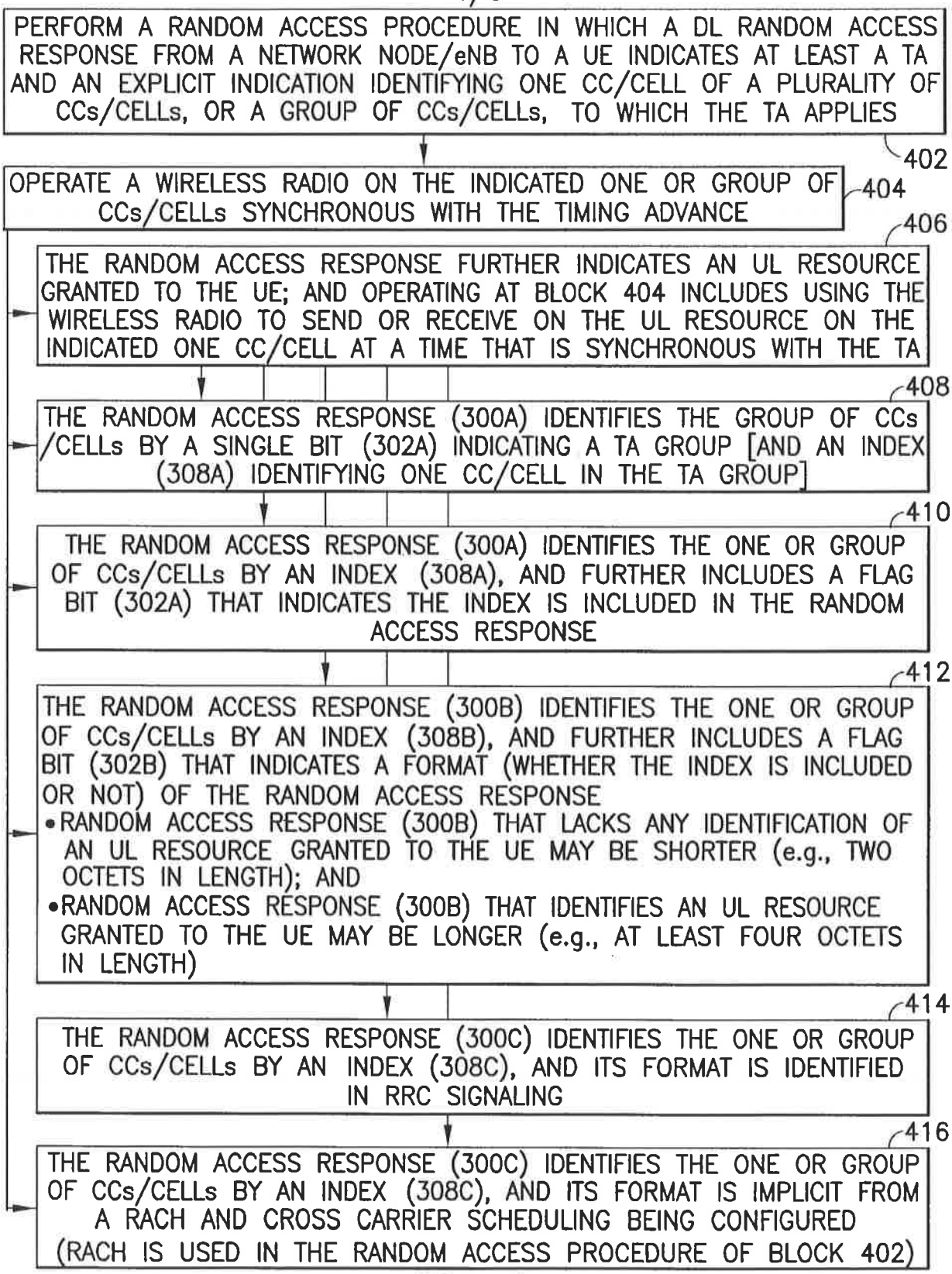

PERFORM A RANDOM ACCESS PROCEDURE IN WHICH A DL RANDOM ACCESS RESPONSE FROM A NETWORK NODE/eNB TO A UE INDICATES AT LEAST A TA AND AN EXPLICIT INDICATION IDENTIFYING ONE CC/CELL OF A PLURALITY OF CCs/CELLs, OR A GROUP OF CCs/CELLs, TO WHICH THE TA APPLIES
402
OPERATE A WIRELESS RADIO ON THE INDICATED ONE OR GROUP OF CCs/CELLs SYNCHRONOUS WITH THE TIMING ADVANCE
404
406
THE RANDOM ACCESS RESPONSE FURTHER INDICATES AN UL RESOURCE GRANTED TO THE UE; AND OPERATING AT BLOCK 404 INCLUDES USING THE WIRELESS RADIO TO SEND OR RECEIVE ON THE UL RESOURCE ON THE INDICATED ONE CC/CELL AT A TIME THAT IS SYNCHRONOUS WITH THE TA
408
THE RANDOM ACCESS RESPONSE (300A) IDENTIFIES THE GROUP OF CCs /CELLs BY A SINGLE BIT (302A) INDICATING A TA GROUP [AND AN INDEX (308A) IDENTIFYING ONE CC/CELL IN THE TA GROUP]
410
THE RANDOM ACCESS RESPONSE (300A) IDENTIFIES THE ONE OR GROUP OF CCs/CELLs BY AN INDEX (308A), AND FURTHER INCLUDES A FLAG BIT (302A) THAT INDICATES THE INDEX IS INCLUDED IN THE RANDOM ACCESS RESPONSE
412
THE RANDOM ACCESS RESPONSE (300B) IDENTIFIES THE ONE OR GROUP OF CCs/CELLs BY AN INDEX (308B), AND FURTHER INCLUDES A FLAG BIT (302B) THAT INDICATES A FORMAT (WHETHER THE INDEX IS INCLUDED OR NOT) OF THE RANDOM ACCESS RESPONSE
• RANDOM ACCESS RESPONSE (300B) THAT LACKS ANY IDENTIFICATION OF AN UL RESOURCE GRANTED TO THE UE MAY BE SHORTER (e.g., TWO OCTETS IN LENGTH); AND
• RANDOM ACCESS RESPONSE (300B) THAT IDENTIFIES AN UL RESOURCE GRANTED TO THE UE MAY BE LONGER (e.g., AT LEAST FOUR OCTETS IN LENGTH)
414
THE RANDOM ACCESS RESPONSE (300C) IDENTIFIES THE ONE OR GROUP OF CCs/CELLs BY AN INDEX (308C), AND ITS FORMAT IS IDENTIFIED IN RRC SIGNALING
416
THE RANDOM ACCESS RESPONSE (300C) IDENTIFIES THE ONE OR GROUP OF CCs/CELLs BY AN INDEX (308C), AND ITS FORMAT IS IMPLICIT FROM A RACH AND CROSS CARRIER SCHEDULING BEING CONFIGURED (RACH IS USED IN THE RANDOM ACCESS PROCEDURE OF BLOCK 402)

FIG.4

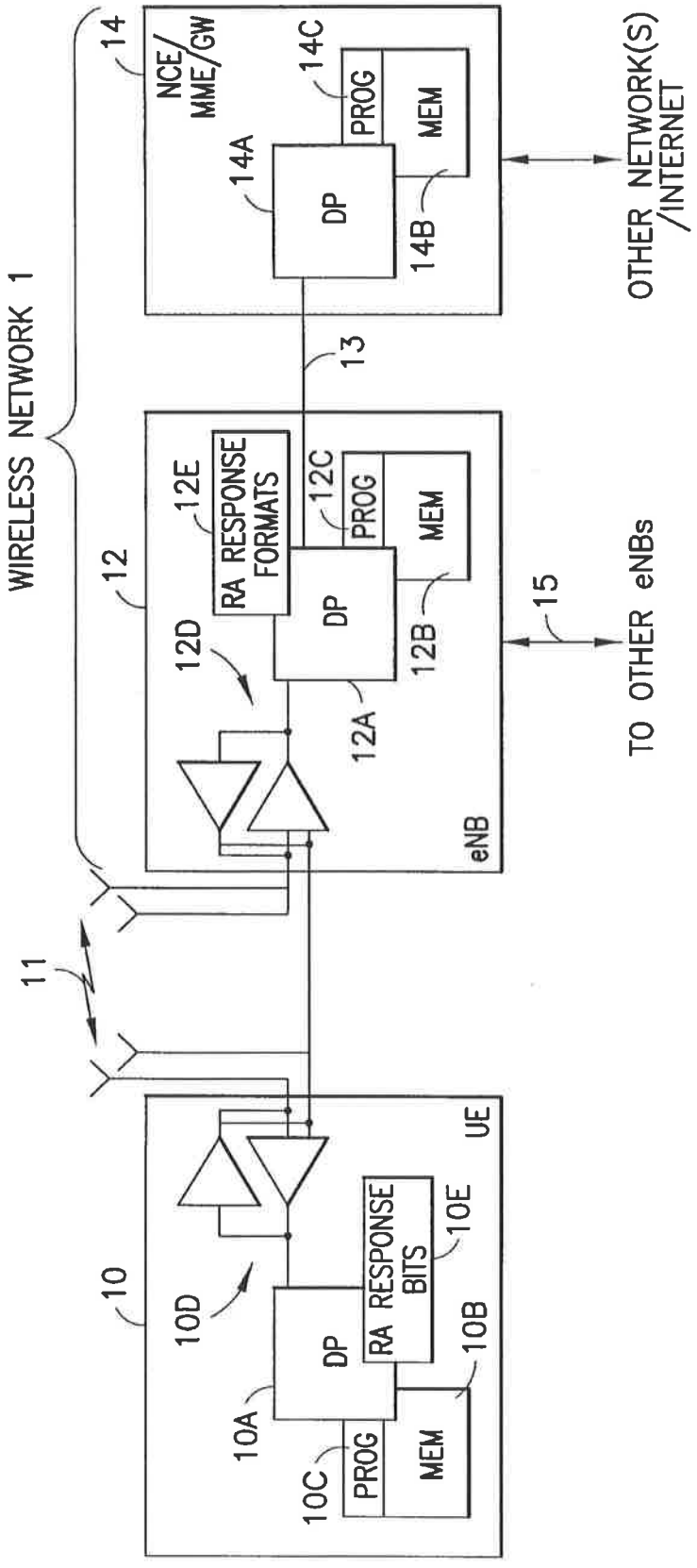

WIRELESS NETWORK 1
14
NCE/
MME/GW
14C
PROG
MEM
14A
DP
14B
OTHER NETWORK(S)
/INTERNET
13
12
12E
RA RESPONSE
FORMATS
12C
PROG
MEM
12D
DP
12B
12A
15
TO OTHER eNBs
eNB
11
10
UE
10D
DP
RA RESPONSE
BITS
10E
10B
10A
10C
PROG
MEM

FIG.5