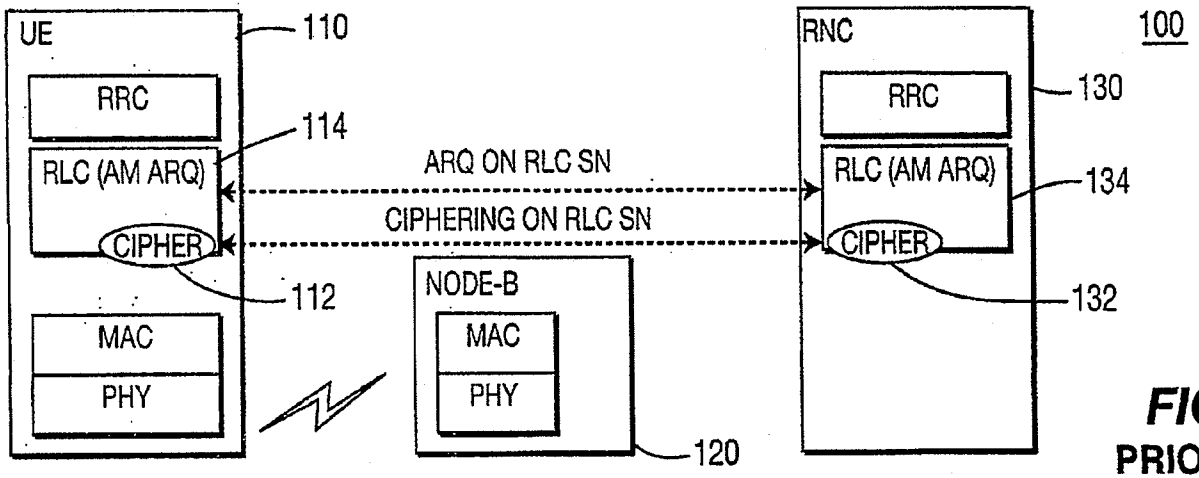


FIG. 1
PRIOR ART

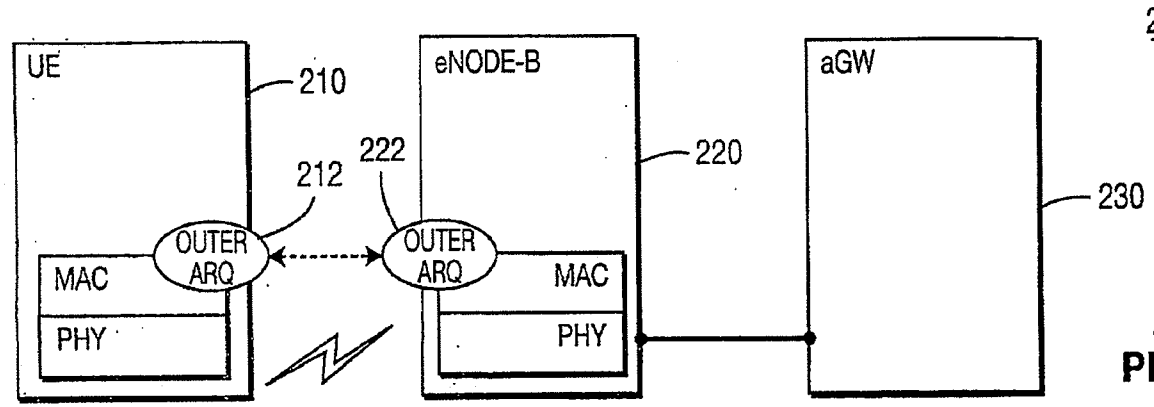


FIG. 2
PRIOR ART

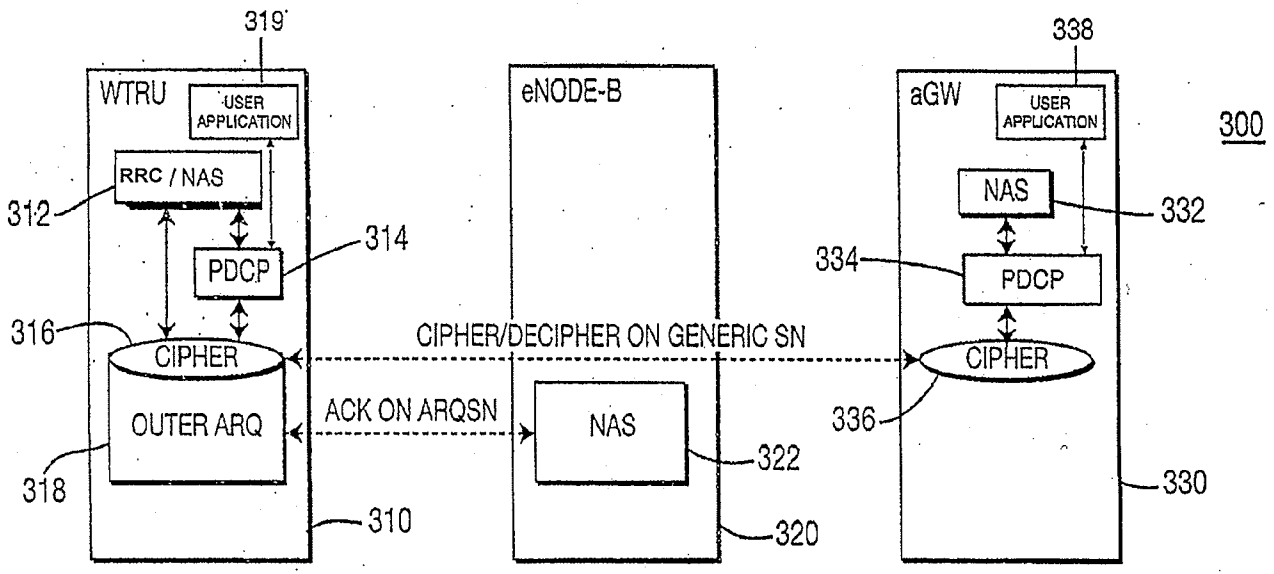

319
WTRU
USER APPLICATION
RRC / NAS
312
PDCP
314
316
CIPHER
OUTER ARQ
318
310
eNODE-B
CIPHER/DECIPHER ON GENERIC SN
ACK ON ARQSN
NAS
322
320
338
aGW
USER APPLICATION
300
NAS
332
334
PDCP
CIPHER
336
330

FIG. 3

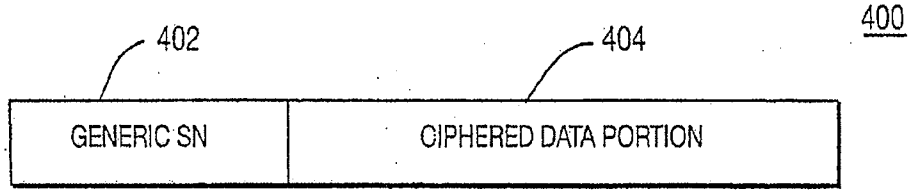

400
402
404
GENERIC SN
CIPHERED DATA PORTION

FIG. 4

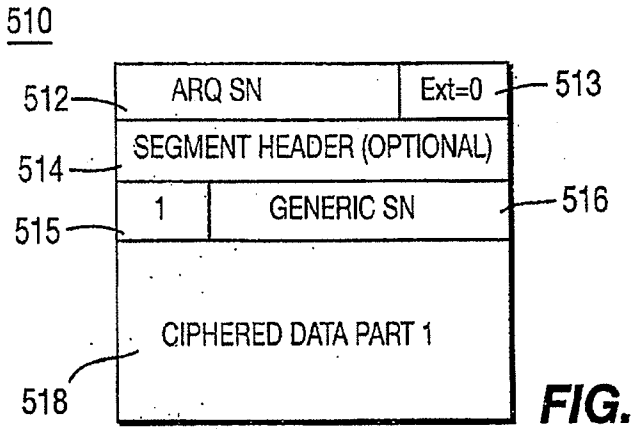


FIG. 5A

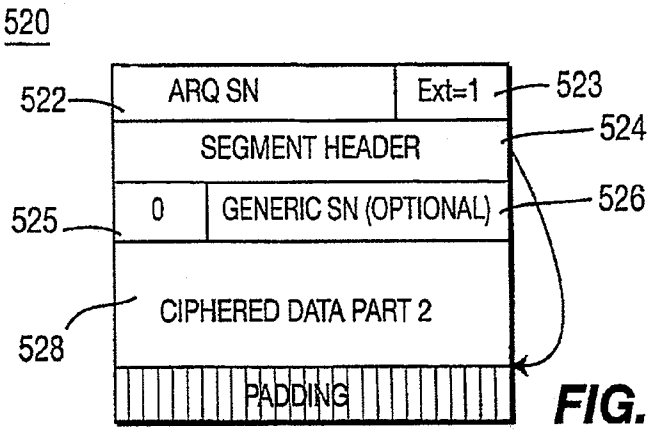


FIG. 5B

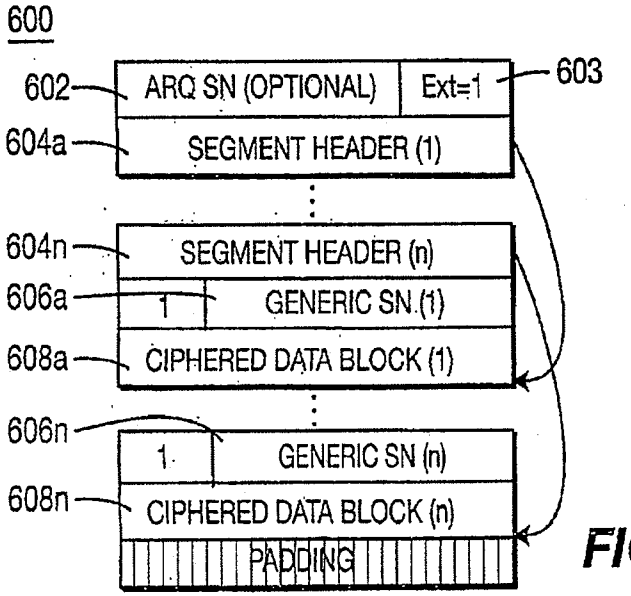


FIG. 6

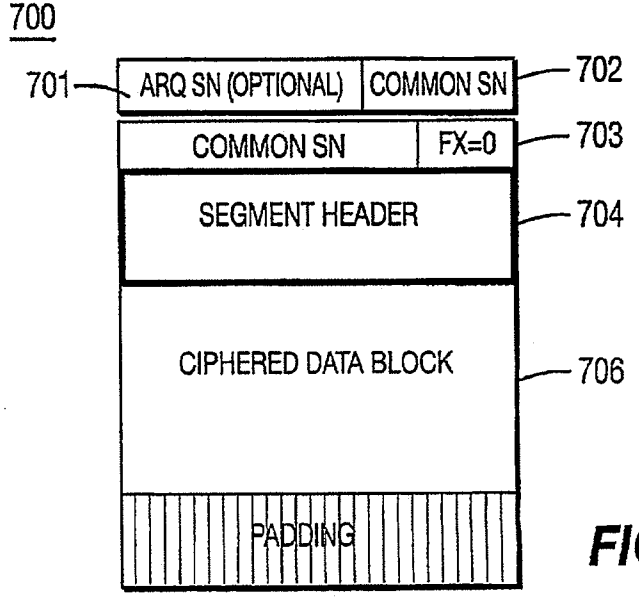


FIG. 7

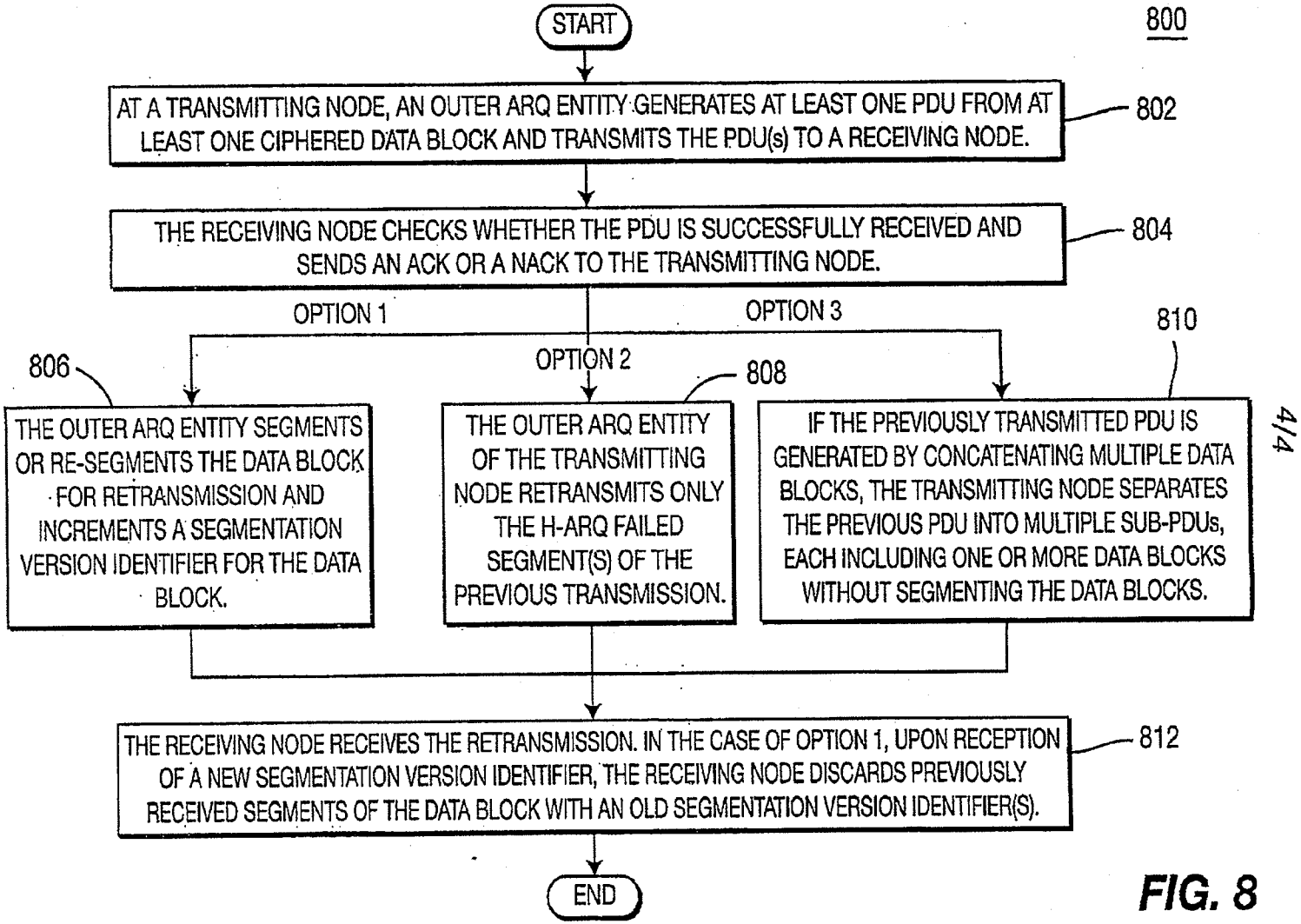

START
800
AT A TRANSMITTING NODE, AN OUTER ARQ ENTITY GENERATES AT LEAST ONE PDU FROM AT LEAST ONE CIPHERED DATA BLOCK AND TRANSMITS THE PDU(s) TO A RECEIVING NODE.
802
THE RECEIVING NODE CHECKS WHETHER THE PDU IS SUCCESSFULLY RECEIVED AND SENDS AN ACK OR A NACK TO THE TRANSMITTING NODE.
804
OPTION 1
OPTION 2
OPTION 3
806
808
810
THE OUTER ARQ ENTITY SEGMENTS OR RE-SEGMENTS THE DATA BLOCK FOR RETRANSMISSION AND INCREMENTS A SEGMENTATION VERSION IDENTIFIER FOR THE DATA BLOCK.
THE OUTER ARQ ENTITY OF THE TRANSMITTING NODE RETRANSMITS ONLY THE H-ARQ FAILED SEGMENT(S) OF THE PREVIOUS TRANSMISSION.
IF THE PREVIOUSLY TRANSMITTED PDU IS GENERATED BY CONCATENATING MULTIPLE DATA BLOCKS, THE TRANSMITTING NODE SEPARATES THE PREVIOUS PDU INTO MULTIPLE SUB-PDUs, EACH INCLUDING ONE OR MORE DATA BLOCKS WITHOUT SEGMENTING THE DATA BLOCKS.
THE RECEIVING NODE RECEIVES THE RETRANSMISSION. IN THE CASE OF OPTION 1, UPON RECEPTION OF A NEW SEGMENTATION VERSION IDENTIFIER, THE RECEIVING NODE DISCARDS PREVIOUSLY RECEIVED SEGMENTS OF THE DATA BLOCK WITH AN OLD SEGMENTATION VERSION IDENTIFIER(S).
812
END

FIG. 8