(54) **COORDINATED SUBSCRIBER ACCESS HANDLING FOR SHARED NETWORK SUPPORT**

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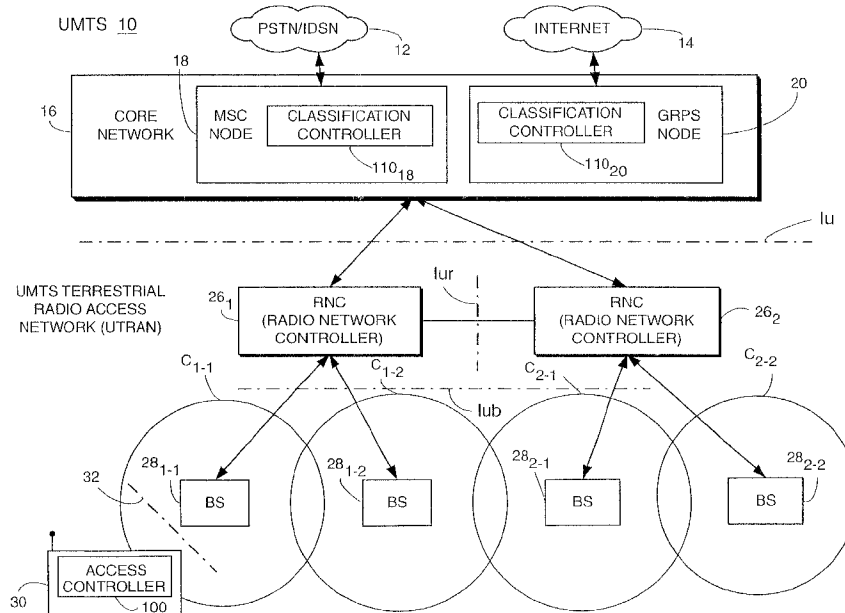
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(57) **ABSTRACT**

To facilitate, e.g., determination of access rights in a shared network context, a telecommunications network transmits, in a broadcast channel over an air interface, an access group eligibility message **(300-2)** to a user equipment unit **(30)**. The access group eligibility message enables the user equipment unit to ascertain, on a basis of access group to which the user equipment unit belongs, whether the user equipment unit is eligible to operate in a cell for which the access group eligibility message is transmitted. The telecommunications network also includes a core network node **(18, 20)** which, upon receipt of request for/from the user equipment unit, classifies the user equipment unit in at least one of plural access groups. Further, the core network node generates, for transmission to the user equipment unit through the radio access network, an access group classification message **(300-1)** which advises the user equipment unit as to which of the plural access groups the user equipment unit belongs. Upon receipt of the access group classification message, the user equipment unit stores an access group classification obtained from the access group classification message in a memory **(102)** at the user equipment unit. In illustrated embodiments, the access group classification message can, as appropriate, be one of a location update response and a location update reject message, either of which can include the access group classification. In accordance with one aspect of the present invention, an access controller **(100)** of the user equipment unit (upon receiving the access group eligibility message) compares the stored access group classification with contents of the access group eligibility message to determine whether the user equipment unit is allowed access to the cell for which the access group eligibility message is transmitted. This determination thus allows the user equipment unit to make a decision whether or not it has access rights in a particular cell, and thereby addresses access rights in complex network configurations such as a shared network situation. Further, the present invention provides an access rights determination scheme generally applicable to a user equipment unit regardless of whether it is in the IDLE mode or in one of the following states of the CONNECTED mode: CELL_FACH state; CELL_PCH state; and URA_PCH state.
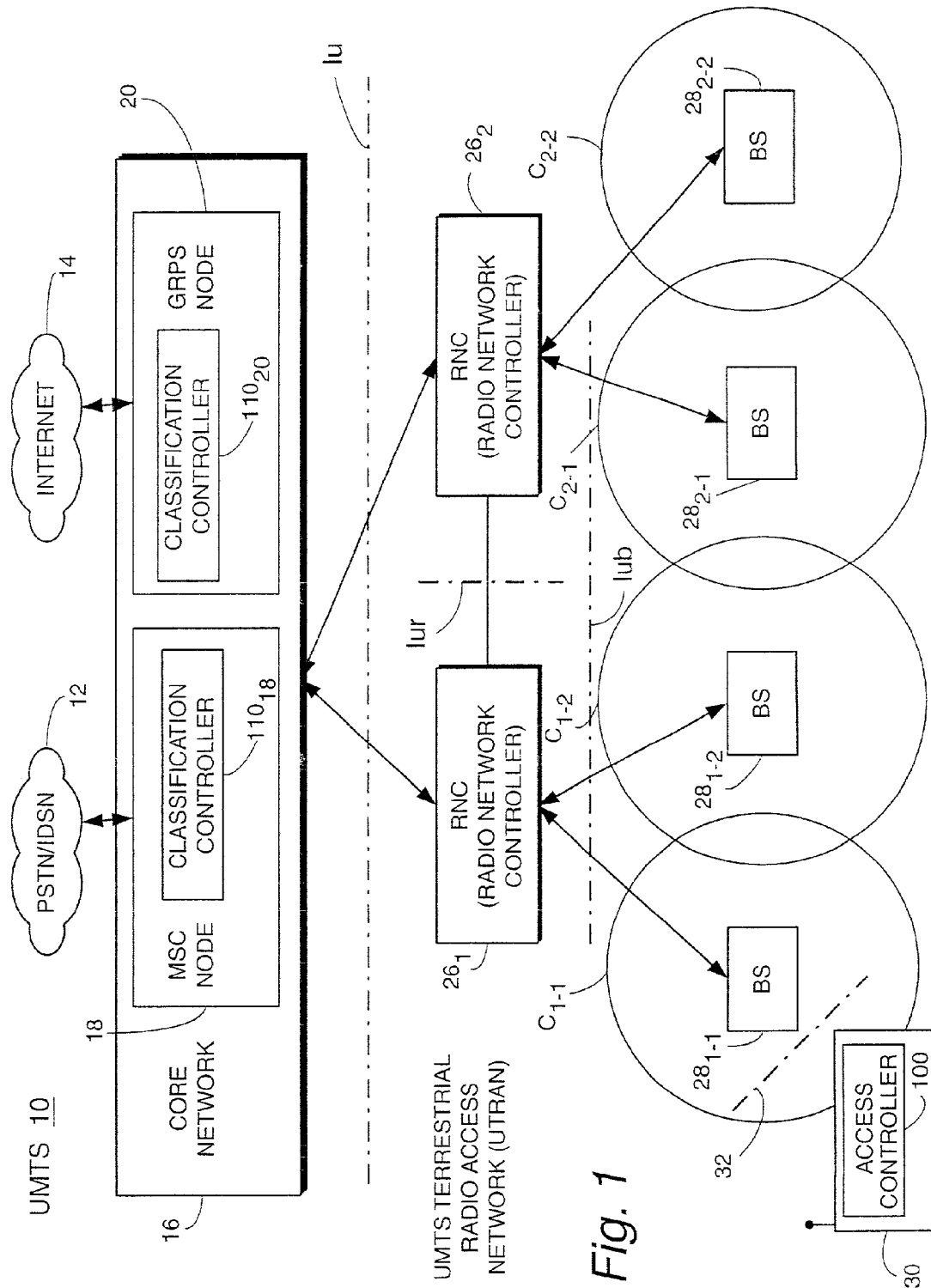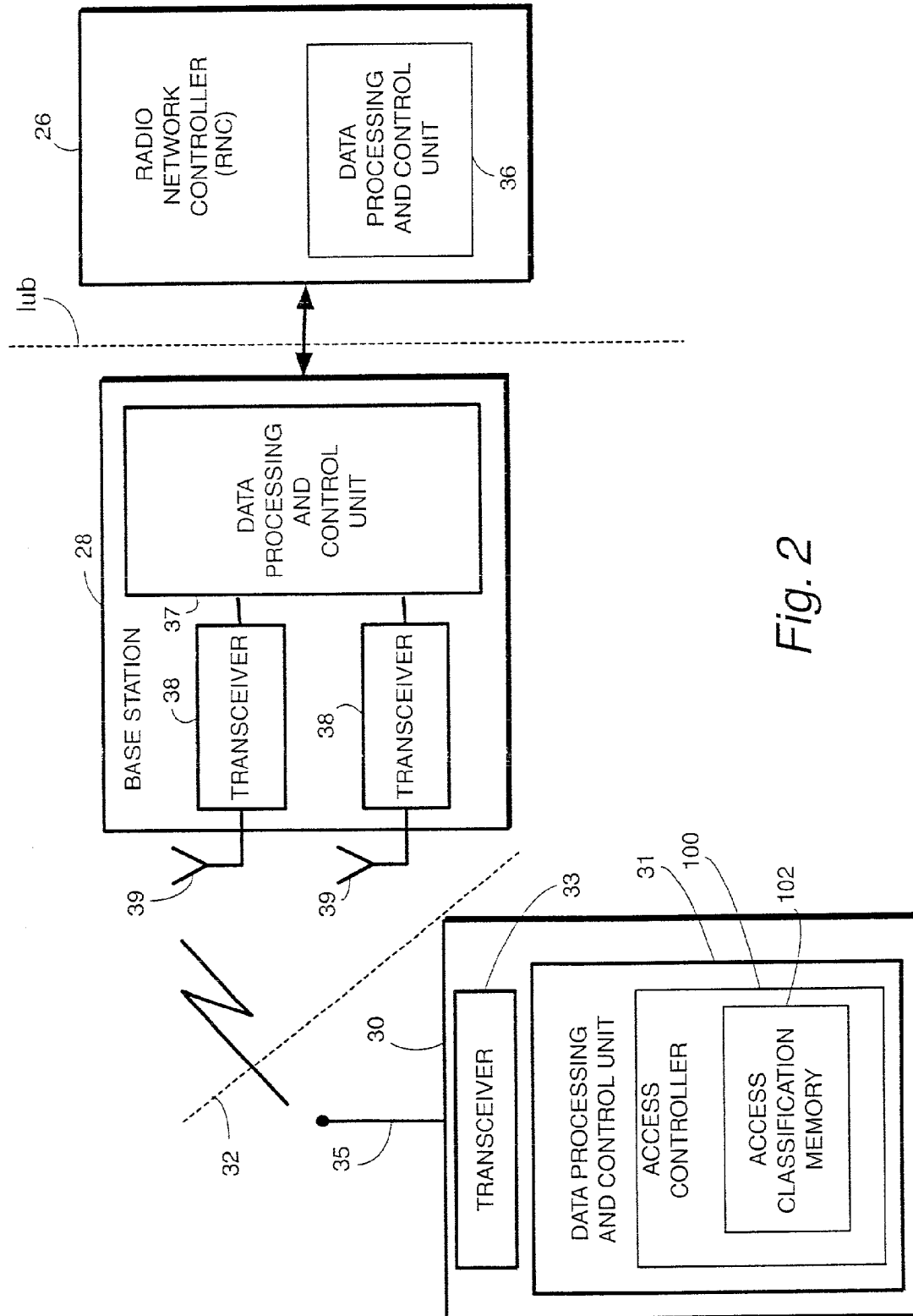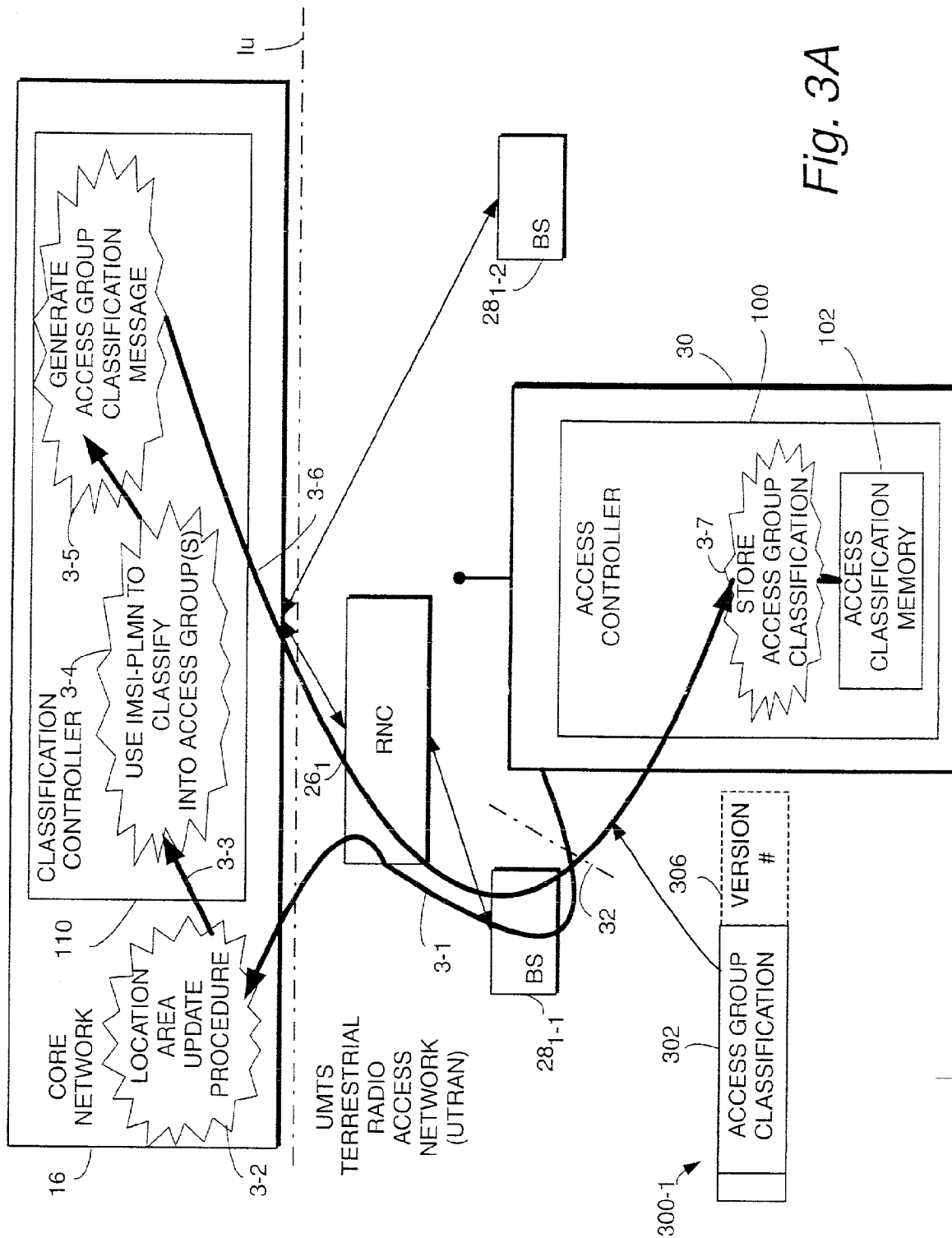
UMTS 10

CORE NETWORK 16

INTERNET 14

PSTN/IDSN 12

GRPS NODE 20

CLASSIFICATION CONTROLLER 110_{20}

MSC NODE 18

CLASSIFICATION CONTROLLER 110_{18}

Iu

UMTS TERRESTRIAL RADIO ACCESS NETWORK (UTRAN)

RNC (RADIO NETWORK CONTROLLER) 26_2

RNC (RADIO NETWORK CONTROLLER) 26_1

Iur

Iub

C_{2-2}

C_{2-1}

C_{1-2}

C_{1-1}

BS 28_{2-2}

BS 28_{2-1}

BS 28_{1-2}

BS 28_{1-1}

32

ACCESS CONTROLLER 100
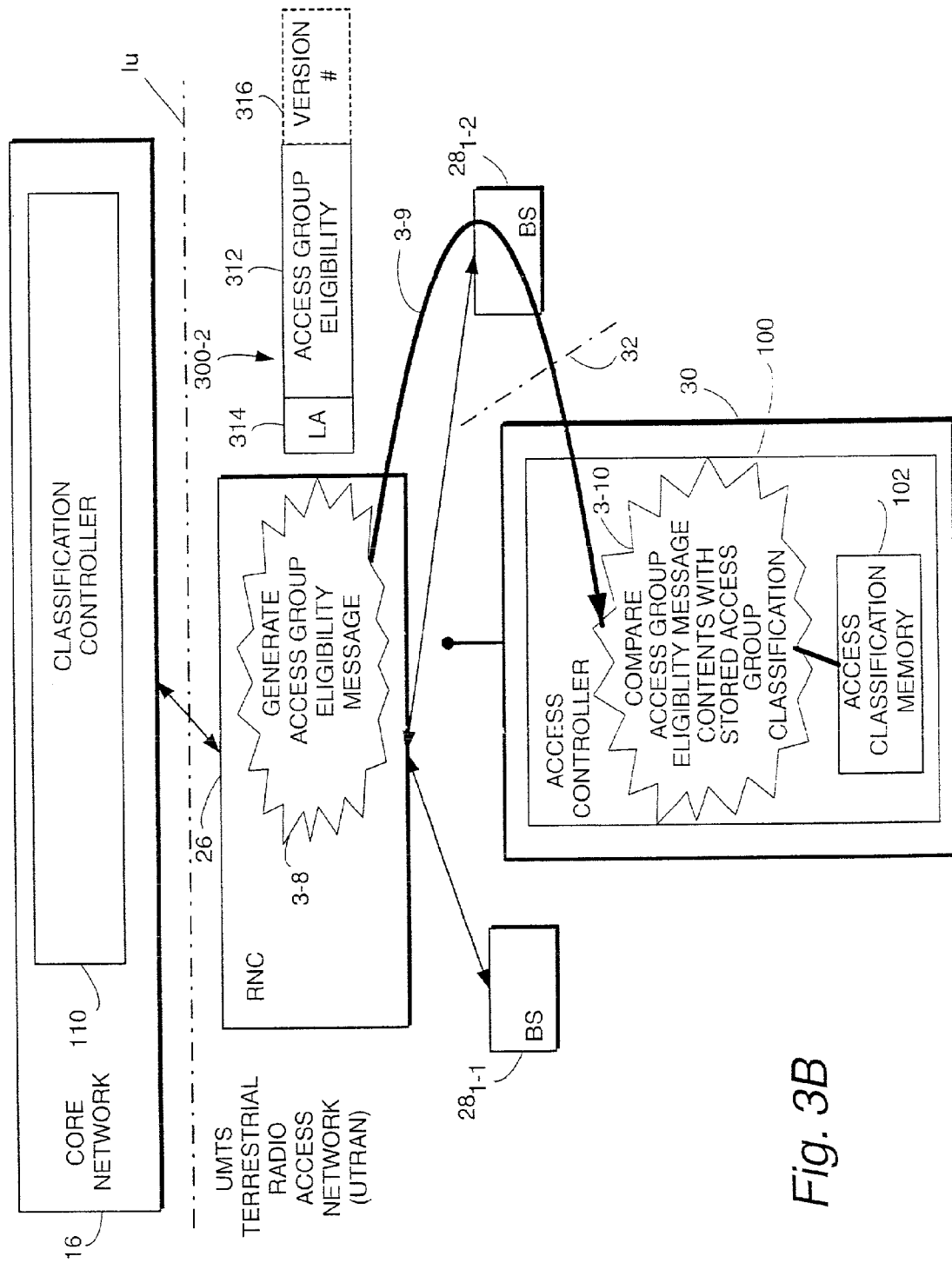
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Fig. 1

Fig. 2

Fig. 3A

Fig. 3B

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