MANAGING A TEMPORARY SUBSCRIBER IDENTIFIER HAVING AN EXTENDED LENGTH DURING CONNECTION SETUP IN 5G NETWORKS

TECHNICAL FIELD

Certain embodiments of the present disclosure relate, in general, to wireless communications and, more particularly, to transmitting wireless device identifier information.

BACKGROUND

Generally, all terms used herein are to be interpreted according to their ordinary meaning in the relevant technical field, unless a different meaning is clearly given and/or is implied from the context in which it is used. All references to a/an/the element, apparatus, component, means, step, etc. are to be interpreted openly as referring to at least one instance of the element, apparatus, component, means, step, etc., unless explicitly stated otherwise. The steps of any methods disclosed herein do not have to be performed in the exact order disclosed, unless a step is explicitly described as following or preceding another step and/or where it is implicit that a step must follow or precede another step. Any feature of any of the embodiments disclosed herein may be applied to any other embodiment, wherever appropriate. Likewise, any advantage of any of the embodiments may apply to any other embodiments, and vice versa. Other objectives, features and advantages of the enclosed embodiments will be apparent from the following description.

In the new third generation partnership project (3GPP) standard 5GS, the system and architecture for 5G and various state machines are described.

One “state machine” is the connection management state model (CM-state model), described in 3GPP technical specification (TS) 23.501.

Generally, connection management comprises of functions for establishing and releasing signaling connections between a user equipment (UE) and core network node. In 5G, this node is called the Access and Mobility Management Function (AMF).

FIGURE 1 illustrates an example of a 5G system architecture, including Nodes (e.g., AMF, UE, (R)AN) and interface names. Connection management relates to signaling connection over the N1 interface illustrated below.

The signaling connection over N1 is used to enable Non-Access-Stratum (NAS) signaling exchange between the UE and the core network. It comprises both the Access Node (AN) signaling connection between the UE and the AN and the N2 connection, between the AN and the AMF.