CLAIMS

1. A method (2000) performed by a wireless device, the method comprising:

transmitting (2010) a first message to a network node, the first message comprising a first portion of a Fifth Generation System Temporary Mobile Subscriber Identity, 5G-S-TMSI, wherein the first message comprises a Radio Resource Control (RRC) request; and

transmitting (2020) a second message to the network node, the second message comprising a second portion of the 5G-S-TMSI, wherein the second message comprises an RRC setup complete message.

2. The method of Claim 1, wherein the second message is transmitted in response to receiving an RRC setup message from the network node.

3. The method of any of Claims 1-2, wherein, prior to transmitting the first message and the second message, the method further comprises:

transmitting (2030), to the network node, a request message requesting the network node to grant the wireless device resources for transmitting the first message; and

receiving (2040), from the network node, a grant message granting the wireless device the resources for transmitting the first message.

4. The method of any of Claims 1-3 wherein, prior to transmitting the first message and the second message, the method further comprises splitting (2050) the 5G-S-TMSI into the first portion and the second portion.

5. The method of Claim 4, wherein splitting the 5G-S-TMSI into the first portion and the second portion is based on a determination that the length of the 5G-S-TMSI exceeds a limit that the network node is capable of receiving in the first message.

6. The method of any of Claims 1-5, further comprising determining, based at least in part on information received from the network node, which portion of the 5G-S-TMSI to include in the second message.

7. A wireless device (110, 200, 330, 491, 492, 530) comprising:

a memory (130, 215, 390-1, 390-2) configured to store instructions; and

processing circuitry (120, 201, 360, 538) configured to perform the method of any of Claims 1-6.

8. A method (2100) performed by a network node, the method comprising:

receiving (2110) a first message from a wireless device, the first message comprising a first portion of a Fifth Generation System Temporary Mobile Subscriber Identity (5G-S-TMSI), wherein the first message comprises a Radio Resource Control (RRC) request;

receiving (2120) a second message from the wireless device, the second message comprising a second portion of the 5G-S-TMSI, wherein the second message comprises an RRC setup complete message; and

obtaining (2130) the 5G-S-TMSI by reassembling the first portion of the 5G-S-TMSI and the second portion of the 5G-S-TMSI received from the wireless device.

9. The method of Claim 8, wherein a size of the obtained 5G-S-TMSI exceeds a limit that the network node is capable of receiving in the first message.

10. The method of any of Claims 8-9, wherein, prior to receiving the first message and the second message, the method further comprises:

receiving, from the wireless device, a request message requesting the network node to grant the wireless device resources for transmitting the first message; and

transmitting, to the wireless device, a grant message granting the wireless device the resources for transmitting the first message.

11. The method of any of Claims 8-10, further comprising transmitting, to the wireless device, one or more of the following:

an RRC setup message, wherein the RRC setup message is transmitted in response to receiving the first message;

information indicating which bits of the 5G-S-TMSI to include in the first portion or the second portion; andan indicator that indicates a length of the first portion of the 5G-S-TMSI that the network node is capable of receiving in the first message.

12. The method of any of Claims 8-11, further comprising using the 5G-S-TMSI to identify the wireless device in a subsequent message.

13. A network node (160, 330, 412, 520) comprising:

a memory (180, 390-1, 390-2) configured to store instructions; and

processing circuitry (170, 360, 528) configured to execute the instructions, wherein the network node is configured to performed the method of any of Claims 8-12.

14. A computer program product comprising a non-transitory computer readable medium (130, 180, 215, 390-1, 390-2) storing computer readable program code, the computer readable program code comprises program code for performing the method of any of Claims 1 and 8.