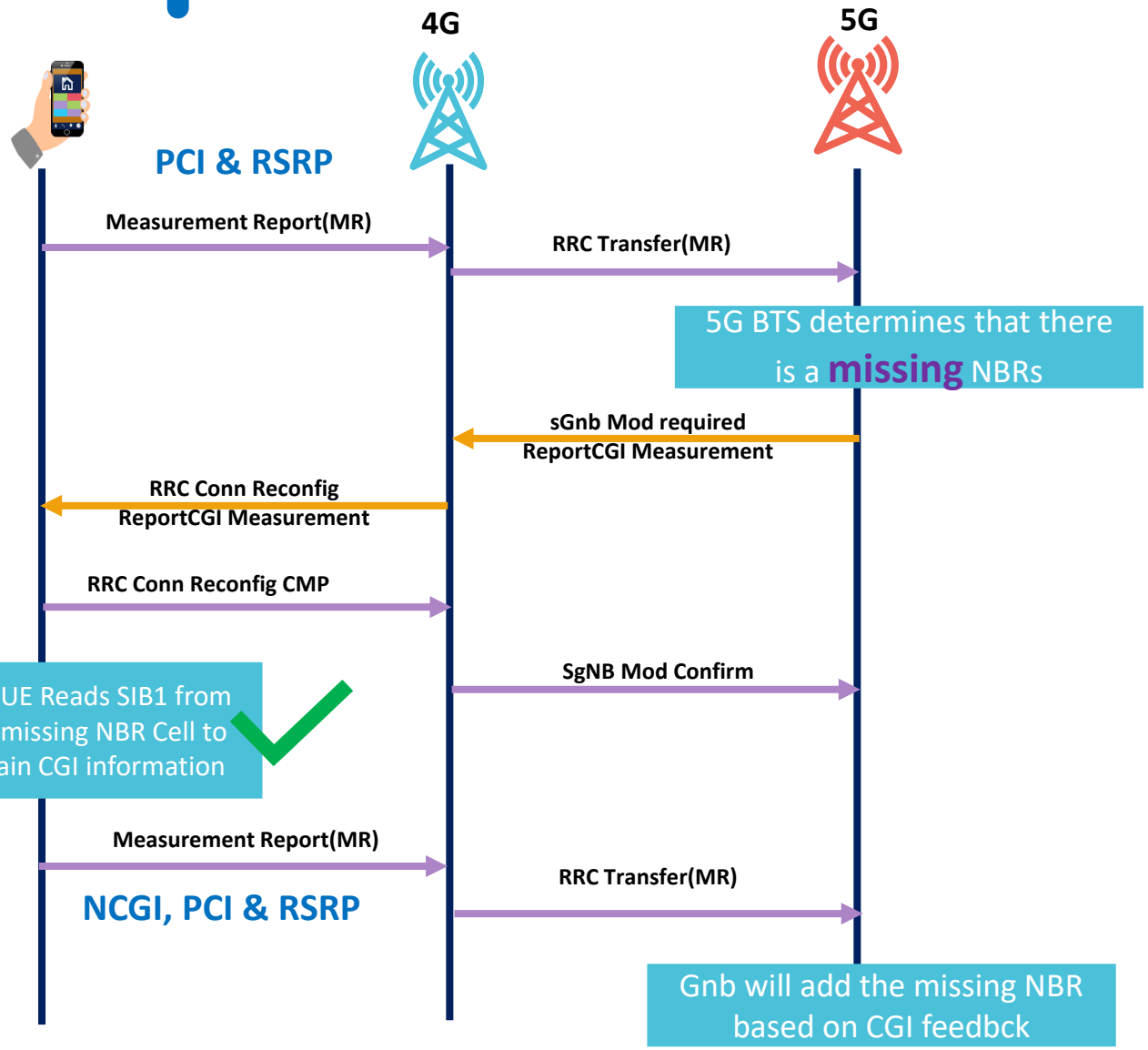
The explanation for why 5G ANR is not working when SIB1 is disabled in the 5G NSA Network

Optimization Technology

Mohamed Eladawi

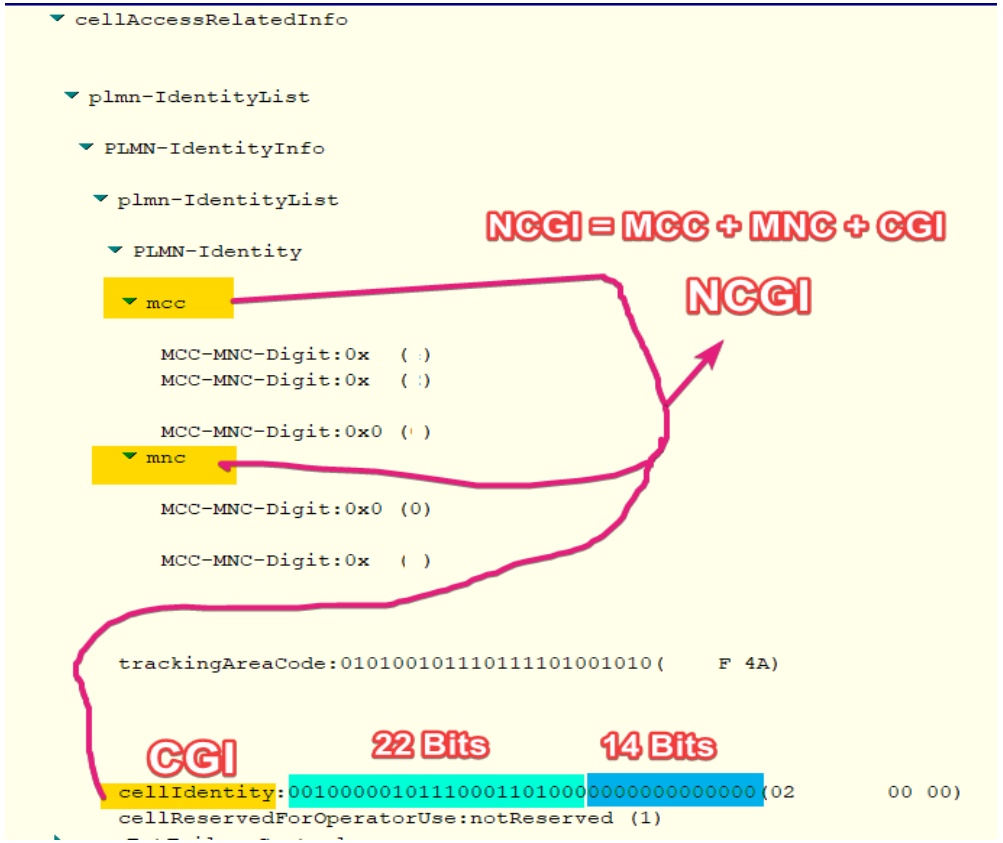
Impact of disabling SIB1 on 5G Non-Standalone

Signaling Flow(5G NSA)



SIB1 Cell Access Related Info

NCGI is broadcasted within SIB-1



Optimization Technology

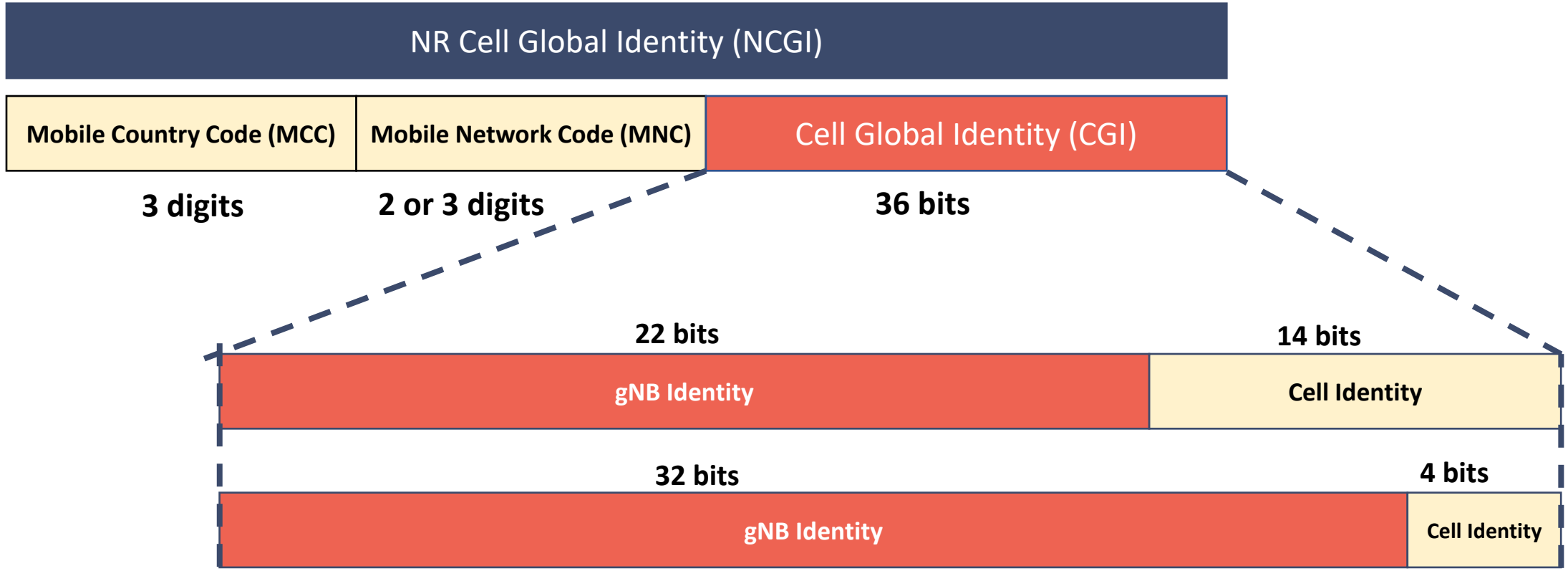
Mohamed Eladawi

Cell & BTS Identity Planning

Cells are identified at a global level using their NR Cell Global Identity (NCGI)

- The Mobile Country Code (MCC) and Mobile Network Code (MNC) uniquely identify the operator`s network.
- The NR Cell Identity (NCI) uniquely identifies a cell within the operator`s network.

The NCGI and NCI structures are illustrated in the Figure below.



Additional information about NCGI Planning

The NCI has a total size of 36 bits. These 36 bits are shared between the g-NB Identity and the Cell Identity. The g-NB identity can be configured to use between 22 and 32 bits. This leaves between 14 to 3 bits for the Cell Identity.

Allocating 22 bits for the g-NB identity is likely sufficient for the majority of networks.

* The number of bits indicates the number of Sites/Cells that can be configured by the network, for example, the number of cells per Base Station can become high when using the Centralized Unit(CU)/ Distribute Unit (DU) split Base Station Architecture. Or