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OpenAir interface for 4G core network and 4G/5G base stations

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With the advent of the fourth industrial revolution (4IR), 5G networks are aiming to support a broad range of network services and applications. Network operators are looking to open-source implementations to expand on the flexibility and re-programmability of networks. This paper introduces an implementation including a 4G Core Network (using the OpenAir Interface (OAI) platform), OAI 4G and 5G Base Stations, and the 4G/5G User. This paper shows the steps followed to have a complete 4G/5G mobile network using OAI. We used Wireshark software for packet visualization when the two Base Stations connect/disconnect to the CN and when the phone is attached/detached from the network. Additionally, some installation pointers, current performance statistics, and video streaming (such as measured download/upload speed and latency between various system components) are included in this paper.