

**Title of Article:** Analysis Of Capacity Limitation In Nigerian Gsm Networks And The Effects On Service Providers And Subscribers.

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**Abstract:** The performance of GSM network is measured in terms of KPIs (Key Performance Indicators) based on statistics generated from the network. The most important of these performance indicators from the operators' perspective are BER (bit error rate), the FER (frame error rate) and the DCR (dropped call rate). The Dropped Call Rate (DCR) is a measure of the calls dropped in a network as it gives a quick overview of network quality and revenues lost. This makes it one of the most important parameters in network optimization. At the frame level in the NMS (Network Management System), the DCR is measured against the Slow Associated Control Channel (SACCH) frame. If the SACCH frame is not received, then it is considered to be dropped calls. For this work data was acquired form the Network Management System of various GSM operators in Nigeria (e.g. MTN, Celtel, Globacom etc.). The acquired data was analyzed to statistically illustrate the extent of revenue that is lost as a result of dropped calls and the consequent impact on the customers/subscribers.