

QoS and QoE trends for emerging services

Abstract:

Many factors matter when looking for QoE. Environmental and human aspects have typically been outside of the QoE measurement scope which have focused for measurable and reproducible facts related to the network connection quality, device battery consumption and applications behavior. When measuring, multiple results need to get collected repeatedly, so test automation will be the key to provide statistical relevancy. After measuring, still will face a complexity issue in how to map a test to the factors.

NMGN has contributed definition of new 5G NR use cases related test cases for critical IoT, Social Networking, High Speed Internet and Content streaming. So far Keysight has been the most active company to define 5G NR testability in 3GPP and NGMN standardization. Those defined tests enable collection of KPI's which could be aggregated to summarize a MOS score for the new services. However, there would first be a need for commonly defined QoE definitions, metrics and methods for those new 5G NR application classes.

5G means new use cases, environments and network dimensions which will set increased demands for performance QoS analysis. 5G NR will introduce increase network capacity and radically higher peak rates combined to 1 ms level latency required for mission critical IoT. 5G NR will be deployed to higher frequencies that will mean more unreliable connection. Also the network coverage concept will change from cell based coverage to beams where beam forming changes the network coverage concept. All this means that 5G creates more demanding test cases for QoS measurements and testing setups. Now the need is to get commonly defined QoE definitions, metrics and methods for new 5G NR enabled use