

Measurement uncertainty investigation in the multi-probe OTA setups

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Abstract:

Extensive efforts are underway to standardize over the air (OTA) testing of the multiple input multiple output (MIMO) capable terminals in COST IC1004, 3GPP and CTIA. Due to the ability to reproduce realistic radio propagation environments inside the anechoic chamber and evaluate end user metrics in real world scenarios, the multi-probe based method has attracted huge interest from both industry and academia. This contribution attempts to identify some of the measurement uncertainties of the practical multi-probe setups and provide some guidance to establish the multi-probe anechoic chamber setup. This contribution presents the results of uncertainty measurements carried out in three practical multi-probe setups. Some sources of measurement errors, i.e. cable effect, cable termination, etc. are identified based on the measurement results.