

Antenna Effect on LTE Terminals Exposed to Realistic Fading Conditions

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Abstract:

Abstract Application of MIMO technology to new wireless communication standards have emphasized the importance of careful antenna design of wireless devices. However it remains unclear how to define a good antenna in practice since the same antenna design may behave differently depending on the propagation environment. In this paper it will be shown what effect different antenna designs of two different LTE phones have on the performance when exposed to two different SCME-based realistic channel models. Some results obtained in conducted tests are also included in order to evaluate separately the degradation introduced by the propagation fading from the degradation related to antenna designs.