

Measurement and Analysis of the Radio Wave Polarisation in Off-Body Communications in Indoor Environment

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Abstract:

Very important effect that should be taken into account in body area networks, especially in indoor environments, is the depolarisation of radio waves during propagation process, due to many reflections from the walls and floors, and due to the occurrence of many scatterers in the environment. In off-body channels, when there is a fixed receiving antenna and on-body transmitting antenna, high polarisation mismatch should be expected. The paper describes the measurement equipment and the investigated scenarios. The results of polarisation components analysis and polarisation angle analysis are discussed.