2 × 2 MIMO Measurements of the Wideband Car-to-Car Channel at 5.7 GHz on Urban Street Intersections

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Abstract:

In this paper we present a measurement campaign aimed to identify important radio channel parameters for selected accident situations on urban street intersections. We focus on two scenarios, that yield a significant number of severe urban accidents: Vehicles traveling on perpendicular streets and nontraffic-light-regulated left turn. The measurements were performed in the german capital Berlin by means of the HHI-Channel-Sounder, a true 2 × 2 Multiple Input Multiple Output (MIMO) wideband radio channel sounder operating at a carrier frequency of 5.7 GHz. Having used antennas with a high spatial separation during the measurements, we discuss results for selected measurements regarding the received power at each antenna.