Capacity Analysis of a Dense Wireless Network within the CUBE Internet of Things Concept

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Abstract:

Today increasingly more devices are becoming mobile-connected, leading towards an Internet of Things whereby everyday objects can communicate with each other. Here, a capacity analysis is performed when multiple (even hundreds of) transmitters and receivers are brought together in a dense environment within the CUBE Internet of Things concept. First, the aggregated capacity offered by the numerous transmitters to the receivers in the considered environment is determined . To this end, the interference of the different transmitters is taken into account. Second, the transmitters are divided into different groups of transmitters which can simultaneously transmit. In this way, the interference is reduced and predefined bit rate streams can be guaranteed.