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Paper Title: Interference Reduction Employing Walsh-Hadamard Precoding in Downlink Heterogeneous Network

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Abstract—In Heterogenous Network (HetNet), indoor customers can gain bigger coverage with the implementation of femtocells. Unfortunately, this implementation will add interference to the macrocell users. In this paper, a precoding technique using Walsh-Hadamard spreading is introduced to the femtocell users in order to reduce the interference towards the downlink of the macrocell users. Results show that the BER performance and the obtainable throughput of the macrocell user improve as the spreading factor used in the femtocell user increases.