

The problem of bit and power loading for bit rate maximization in orthogonal frequency division multiplexing data communications over indoor powerline channels is investigated, and a simple method for bit/power allocation in half a cycle of the mains is developed. The proposed solution is based on the so-called Zadeh's representation for modeling the linear periodically time-varying behavior of powerline channels. Numerical results show the superiority of the proposed method over other solutions available in the technical literature in a real-world scenario.