

291. IMPROVED COOPERATIVE SPECTRUM USAGE IN COGNITIVE RADIO NETWORKS THROUGH MODULATION

¹Poonthamil.V ^{1,2}Thenral.B ³Dr.Thirunadana Sigamani

P.G. Student (M.E. C&N) Research Scholar HOD/CSE

^{1,2}Department of Electronics & Communication Engineering,GTEC, Vellore.

²St. Peters University, Chennai.

³Department of CSE, St. Peter's Engineering College, Chennai – 600054.

¹poonthamil.vu@gmail.com ²thendral_ece@gtec.ac.in

Abstract- The major task in cognitive radio network is to consume the spectrum effectively. Authentication process in CR network, always consumes a portion of spectrum. Hence we find a new method to mitigate this problem of spectrum wastage. We propose a new cooperative spectrum sensing for cognitive radio (CR) systems that is designed to detect low-power primary users (PUs). In previous works, all cognitive terminals (CTs) are within the no-talk zone of Primary user, which is that the province that a CT should not use the band of PU when it lies within the province. However, when the PU transmitted at low capacity, only some cognitive terminals will lies within the no-talk zone. It is therefore cleared that low-power PUs cannot be protected sufficiently . When standard sensing system are used. To solve this problem, we propose a new system in which CTs perform sensing in a number of different stages. Through simulations and performance analysis, we show that our proposed system can detect low-power PUs in which it has high accuracy, results in the protection of PUs

Keywords – Cognitive radio, spectrum sensing, transmission power, cooperative sensing, sensing

Journal of Science and Innovative Engineering & Technology