Enhancement of Capacity in a MC-CDMA based Cognitive Radio Network Using Non-Cooperative Game Model

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Abstract : This paper addresses the issue of resource allocation in the emerging cognitive technology. Focusing the quality of service (QoS) of primary users (PU), a novel method is proposed for the resource allocation of secondary users (SU). In this paper, we propose the unique utility function in the game theoretic model of Cognitive Radio which can be maximized to increase the capacity of the cognitive radio network (CRN) and to minimize the interference scenario. The utility function is formulated to cater the need of PUs by observing Signal to Noise ratio. The existence of Nash equilibrium is for the postulated game is established.

Keywords : cognitive networks, game theory, Nash equilibrium, resource allocation
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