

1106-68-261

Amalya Mihnea* (amalyamy@yahoo.com) and **Mihaela Cardei**. *Analysis of Interference and Scheduling for a Robust Channel Assignment Method in Cognitive Radio Networks.*

Cognitive radio networks (CRNs) are a promising solution to the problem of inefficient spectrum usage. This technology allows primary users (PUs) to share the spectrum with secondary users (SUs), where SUs communicate through unassigned spectrum bands without disrupting the regular usage of the PUs. CRNs allow SUs to take advantage of unoccupied spectrum in an opportunistic manner using dynamic spectrum access strategies. Network interference is an important parameter that affects the performance of a network. By reducing interference, the capacity of the network is improved and this leads to an increased efficiency in communication. The analysis of interference helps us to choose the most efficient parameters for our algorithm and to design appropriate scheduling patterns. This study is an extension to a previous work in which a channel assignment algorithm that is robust to the presence of PUs was introduced. (Received September 12, 2014)