

## **Game Theoretical Approach to Cognitive Radio Environments**

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Access to unlicensed spectrum has thus far been based on simplistic rules, such as a transmission power limitation, requirement for tolerance of interference, and a relaxed out-of-band transmission mask. Such rules originate from the rudimentary applications originally envisaged for such spectrum, which do not consider the current technical capabilities of radio devices.

In this presentation Game Theory (GT)-based power coordination mechanisms are discussed. These mechanisms incorporate some aspects of Cognitive Radio (CR) functionality. The GT approach is additionally considered as a way to allow for lighter regulatory rules or outright self-regulation for resource allocation in ISM bands.