Abstract

Cognitive Radio (CR) is the future of radio systems giving authorities and end users unprecedented capabilities, and completely new services expectations. This paper aims at introducing an evolutionary novel Cognitive Radio adaptation engine architecture inspired from theories developed in cognitive sciences. Adaptation is a fundamental feature of CR necessary for many applications and use cases such as dynamic spectrum access, and emergency and disaster relief communication systems. The proposed architecture employs meta-heuristic techniques to dynamically and autonomously self-adapt to external varying stimuli, in order to reach some objectives. The implemented architecture is shown to be suitable for applications of emergency and disaster relief communication systems.
An Evolutionary Cognitive Radio Adaptation Engine Architecture Inspired from Cognitive Sciences

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- Wireless

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