A SURVEY ON SPECTRUM SENSING TECHNIQUES FOR COGNITIVE RADIO

V. STOIANOVICI¹ V. POPESCU¹ M. MURRONI²

Abstract: The paper refers to the increased demand for a new approach to efficiently use the available mobile communications spectrum resources. The current static assignment of spectrum often exceeds the available bandwidth. Cognitive Radios (CR), self-learning, adaptive and intelligent radios with the capacity to sense the radio environment and to adapt to the current conditions like available frequencies and channel properties, can use the spectrum in a more flexible way. The spectrum sensing capacities of the CR rely on advanced signal processing techniques and can be enhanced by using cooperative sensing.

Key words: Cognitive radio, Spectrum Sensing, Digital Signal Processing.

¹ Dept. of Electronics and Computers, *Transilvania* University of Braşov.

² Department of Electrical and Electronic Engineering, University of Cagliari.