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Spectrum Sensing Techniques: A Survey

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Abstract - The rapid development of technologies and services in wireless communication lead to spectrum scarcity. The rapid growth of wireless devices will overcrowd the frequency spectrum in the upcoming years. by many researches, it is said that many licensed bands are underutilized. this idea of utilizing the frequency spectrum of licensed band is introduced in CR networks. cognitive radio is enabled to avoid interference for primary users in the frequency spectrum. In this paper, the survey is based on the cognitive functions, characteristics, challenges and different sensing methods in cognitive radio.

Keywords—*spectrum sensing, survey, cognitive radio, detection techniques*

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Twin-Copter Based Smartphone Photography Device

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Abstract— In recent years, the development of quad-copter technology has increased drastically, but it is proved to be an expensive choice commercially. Our paper discusses about twin-copter, following the mechanism of helicopter or quad-copter proving it to be inexpensive compare to quad-copter. The opportunities and challenges faced by twin-copter are discussed in this paper.

Keywords—*Unmanned Aerial Vehicle, Photography, Surveillance, Twin-rotor*