White Spaces potentially available in Italian scenarios based on the geo-location database approach

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Abstract:

In this work spectral resources potentially available for White Space Devices (WSDs) in the TV band is investigated in different Italian scenarios. The adopted methodology is based on the geo-location database approach used either in autonomous operation or in combination with sensing techniques.

From simulation and measurement results, it is evident that in Italy the 470-790 MHz band is densely utilized and most of the potentially available WS are located in low populated zones such as mountain or hilly areas. The amount of WS strongly depends on many different parameters such as the criteria adopted to protect the incumbent service or the topology of the considered area. Preliminary results on the possible benefits derived from the combination of geo-location database and sensing techniques are discussed.