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## **Implementation Aspects of an OFDM based Cognitive Radio**

### **Abstract**

Cognitive radios are an approach to overcome problems caused by radio interferences. They have the capability to be aware of the surrounding radio environment and to use reconfigurable means, realized as a software defined radio. Using OFDM as a cognitive radio's main modulation technique has several advantages, for example the variety of parameters that can be set to adapt to the radio environment.

This paper discusses cognitive radios based on OFDM and describes implementation aspects with their possibilities and limitations. Also, an example implementation is proposed and measurement results are shown.

**Examiner: Prof. Dr.-Ing. Uwe Meier**