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GRID-based approach for Power Measurement in digital wireless communication systems

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Abstract

The combined use of multitaper estimation and wavelet thresholding has proved very attractive for achieving the true power spectrum of signals peculiar to digital wireless communication systems, and thus carrying out accurate and repeatable power measurements. Nevertheless, the computational burden induced is too heavy.

The paper presents a GRID computing based approach to make the aforementioned digital signal-processing algorithms enforceable in a real-time context. All adopted software strategies are explained in detail along with major results concerning performance assessment and actual measurements.