

NOVEL MULTISTAGE MULTIRATE SYSTEM FOR ECG SIGNAL

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ABSTRACT

Multistage multirate signal processing is a qualifying technology that brings DSP techniques to the applications changing the rate of a signal. The Multirate filtering technique is widely used for meeting different sampling rates in the system. This paper envisages the implementation of multistage proposed filter structures of polyphase decomposition techniques with decimator and interpolator. This proposed filter structure is implemented using an analysis filter and synthesis filter with polyphase branches which reduces the computational complexity and adopts parallelism. The results analysis show in three different cases of proposed filter structure with multistage and compare with wavelet 9/7 filter to find the best removing noise elimination filter structure for ECG signal.

KEYWORDS: *Multistage, Multirate, Analysis, Synthesis, ECG*

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