Abstract

Removal of noise from ECG Signals leads to the accurate analysis of potential diseases. ECG Signals are low frequency signals. In this paper, FIR low pass filter have been designed with the help of window techniques at cut off frequency 60 Hz to remove noise from corrupted signal. Additive white Gaussian noise (AWGN) is added artificially to the ECG samples recorded from MIT-BIH database. Comparison of ECG Signal before and after filtering is done on the basis of two parameters i.e. signal to noise ratio and average power. The results are calculated using Gaussian, Bartlett and Hann window based FIR filter.

References

- Xin Liu, Y. Zheng, M. W. Phyu, Bin Zhao, Minkyu Je, "Multiple Functional ECG Signal is Processing for Wearable Applications of Long Term Cardiac Monitoring," IEEE
Performance Evaluation of Various Window Techniques for Noise Cancellation from ECG Signal

- How to use the PhysioBank ATM, Available [online]: http://physionet.org/cgi-bin/atm/ATM

Index Terms

Computer Science  Signal Processing

Keywords
FIR digital filter  Signal to noise ratio (SNR)  Average Power  Window Technique.