A Review of ECG Data Compression Techniques

Abstract

Electrocardiogram (ECG) data compression reduced the storage requirements to develop a more efficient tele-cardiology system for cardiac analysis and diagnosis. The ECG compression without loss of diagnostic information is based on the fact that consecutive samples of the digitized ECG carry redundant information that can be removed with very less computing effort. This paper focuses on providing a comparison of the major techniques (direct, transform, parameter extraction and 2D approaches) of ECG data compression which are intended to attain a lossless compressed data with relatively high compression ratio (CR) and low percent root mean square difference (PRD). The paper concludes with the presentation of a framework for evaluation and comparison of ECG compression schemes.

References

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Index Terms

Computer Science  Signal Processing
Keywords
Electrocardiogram; ECG; Compression; CR; PRD; PRDN; QS