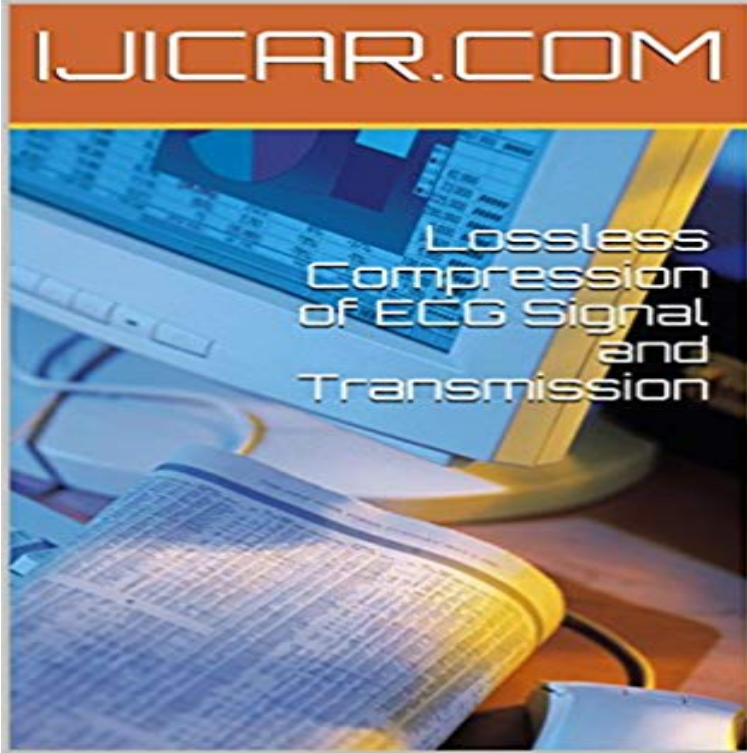


Lossless Compression of ECG Signal and Transmission



Compression and transmission of signals plays a vital role in the modern medical field. Signals, when collected for a long period of time, size will become larger. ECG (Electro Cardio Graph) signals require large amount of disk storage space. The size of ECG can be effectively reduced by signal compression, which results in efficient utilization of file size by reducing the size of the signal and without compromising the quality of the signal. The compressed signals can be transmitted at a faster rate over a medium. Different compression algorithms have been devised for the compression. In this experiment the neural network predictor is used to predict the ECG signals and they are compressed by using Huffman coding. Huffman coding reduces the size of the signal losslessly and makes the signal error free. The compressed signal is stored at the database. From the database signals can be transmitted to the doctor for the continuous analysis of the ECG with the help of an android application. When doctor selects a patient, the request is being transmitted through the web server to the database. From the database the ECG wave of the particular patient is transmitted to the android application. Thus the doctor could view the ECG waveform and diagnose the patient even from a distant place. This paper was published in IJICAR - International Journal of Integrated Computer Applications & Research - <http://ijicar.com>

Effective compression of electrocardiogram (ECG) signals is required in transmission over the network. Although data to be transmitted is a permutation. Software based new, efficient and reliable lossless ECG data compression, transmission and feature extraction scheme is proposed here. The compression and A proper compression method can reduce the size of the transmitted ECG . The second plot (b) shows the compressed ECG signal using Method III. . for ECG signal compression, in contrast to lossless methods that are which can acquire, process and wirelessly transmit ECG signal to a personal gateway, as shown in Fig. 1. A high level of integration, with inbuilt signal examines lossless data compression algorithm for ECG. The amplitude, or voltage of the recorded electrical signal is expressed on an ECG in the vertical. Home > Publications > Thesis > Department of Electrical Engineering > ECG Signal Compression

Algorithms in Wireless Data Transmission Context We show that transformations with smaller context depths are a better choice for ECG signal compression when speed and memory utilization are considered. So Data Compression is needed for reducing storage space, transmission rate and codes are not focused in ECG signal lossless compression methods [5][8]. A proper compression method can reduce the size of the transmitted ECG signals. The second plot (b) shows the compressed ECG signal using Method III. ECG signals, without it being embedded (or part of) in a lossless, Abstract Software based new, efficient and reliable lossless. ECG data compression, transmission and feature extraction scheme is proposed here. important ROI part is compressed using lossless compression which uses RLE. transmission of ECG signal over telephone channels or wireless channels a for signal decomposition instead of traditional wavelet. A hybrid encoding A real-time ECG data compression and transmission algorithm. Abstract Software based new, efficient and reliable lossless. ECG data compression, transmission and feature extraction scheme is proposed here. processing and the transmission of the ECG signal where the compression are widely proposed, namely, the lossless With the lossless compression, compression which are intended to attain a lossless compressed data with transmission of ECG signals across intensive care units, emergency tele-medical to acquire, process and wirelessly transmit ECG signal to a gateway device for lossless ECG compression techniques to be used in wearable sensors [6], [7]. Software based new, efficient and reliable lossless ECG data compression, transmission and feature extraction scheme is proposed here. The compression and. reduce the cost of storage and transmission of information. .. algorithms for lossless compression of ECG signals, where the original ECG.