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RESEARCH ARTICLE

DESIGNING A VIRTUAL MACHINE FOR IDENTIFICATION OF CARDIAC ARRHYTHMIAS USING LAB VIEW

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Abstract— Various projects have been proposed for acquiring and analysis of ECG signals using different software. To be in advance this work focuses not only on acquiring and analysis of ECG signal but also on identification of cardiac arrhythmias. This would bridge the gap between medical physicians and engineers. Our project is carried out with the help of LabVIEW software (version 8.2). This model work collects the waveform from the affected person, analyzed and particular disease is identified. Initially, The ECG signals are picked from the patient body using the electrodes (surface electrodes). The signal is obtained using ECG amplifier for better amplification which is then fed to PC through NI ELVIS DAQ. Here the waveform in analog form is converted to digital form and is analyzed for detecting the peak intervals of the ECG signal acquired, based on which the identification of cardiac arrhythmias is done by sending them to the loops containing the conditions for cardiac arrhythmias. Based on the results obtained from the analysis of the ECG signal and comparison with the loop conditions, the cardiac arrhythmias are identified and displayed instantly.

Key Terms: - Electrocardiogram; Laboratory Virtual Instrumentation Engineers Workbench; Data Acquisition; Educational Laboratory Virtual Instrumentation Suite

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