

TRANSDISCIPLINARY RESEARCH PROPOSAL

Investigation for various ECG acquisitions

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Suggested team members:

Cardiology/doctors

Image processing researcher

Embedded system researcher

Objective

1. To investigate methods for capturing ECG signal
2. To enhance selected methods with necessary technology
3. To test and validate ECG acquisition system

Methodology

A thorough investigation will be conducted to identify at least 2 new methods of acquiring ECG signal based on specifications laid by research team. The possible criteria could be ease of equipment handling and robust towards subject movement. Upon identification of methods, the appropriate sensors will be assembled. This will be conducted by the embedded system experts. The methods will then be tested for their performance and only one will be put forward for validation. The standard ECG signal format will be acquired using proposed method and enhanced using signal processing.

Expected Outcome

The project output will be an improved if not new method to acquire ECG signal. The investigation will lead to findings on image processing, signal processing and instrumentation based on ECG signal.