Ongoing research project (2016-2019)

Project Title: Development of short range health monitoring system using ZigBee based wireless communication

Period: 2016-2019

Funding Agency: Department of Science & technology and Biotechnology, Govt of West Bengal

Total Funding in INR: 9.45 Lakhs.

Principal Investigator / Coordinator: Dr. Rajarshi Gupta

Collaborators outside the institution (if any): Nil

Objective of the project:

The objective of the proposal is to monitor cardiac patient(s) from short distance using wireless communication technology. For this, a portable module (named biomedical sensor node, or, BSN) will be attached to the monitored patient body. A remote end transceiver unit, named BSCU, or, biomedical signal collection unit, coupled with a personal computer, will be placed at a central location within the same hospital/ healthcare unit. A software named cardiac signal processing (CSP) system, to be developed, in the central computer will enable a skilled professional/ doctor to acquire medical data, on demand, from patient. The patient records can also be stored in data files and shared with experts for treatment advice.

Full time research scholars associated: Sri Soumyak Chandra

Project Brief:

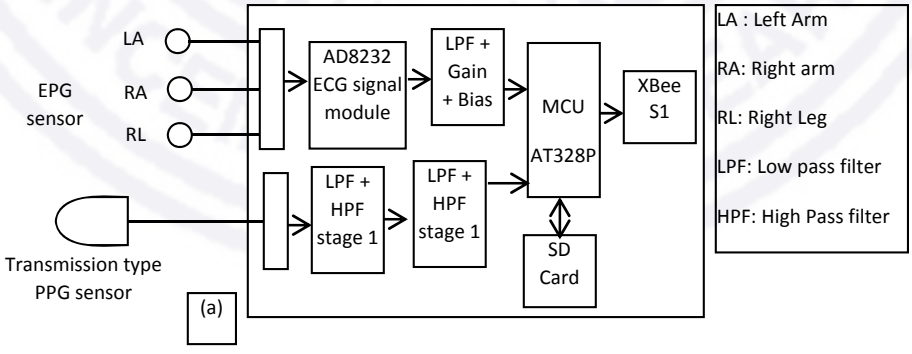


Figure: Block Diagram of developed BSN

Fig: Lab prototype Master Node

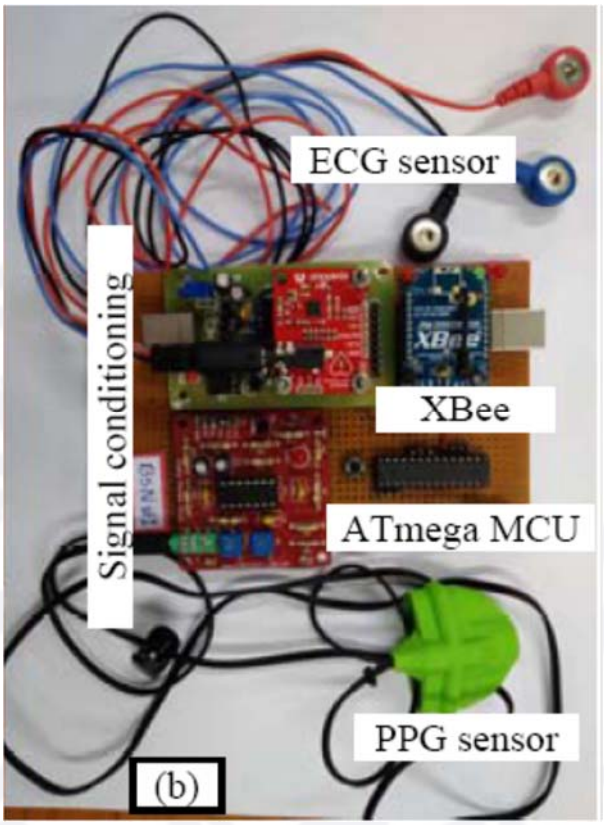
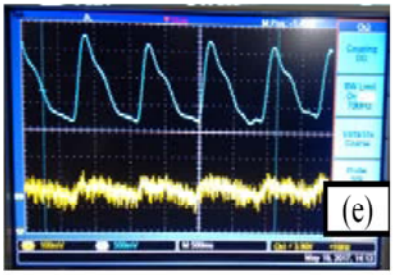


Fig: Lab prototype Biomedical Sensor Node



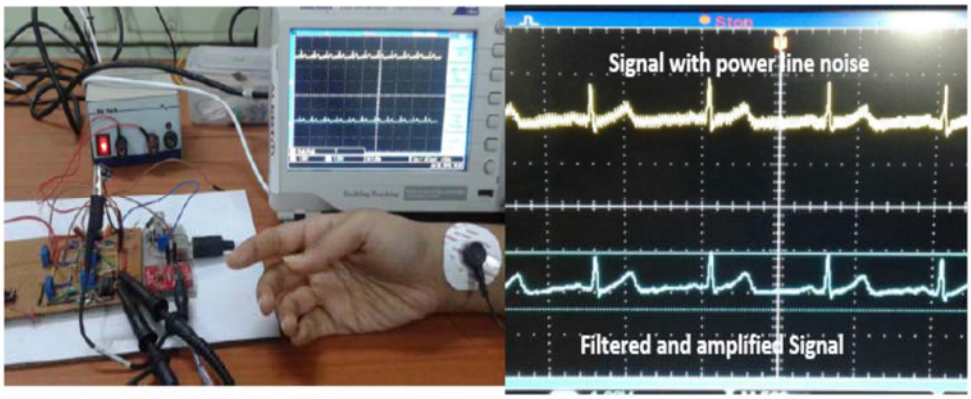


Fig: Hardware testing of BSN signal conditioning