

Fachbereich Elektrotechnik und Technische Informatik
Department of Electrical Engineering and Computer Science

Praxisprojekt / Practical Project
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**Design and Development of a Heart Rate and Body
Temperature Visualisation System**

Abstract

Biomedical engineering is an international key technology which develops new engineering subfields. It closes the gap between engineering and medicine. Biomedical engineering is an application of engineering which bases on the rules and laws of medicine.

Some issues of biomedical engineering conduce to simplify the work of nurses and medicines like in this project.

This project deals with the visualization of body temperature and the heart rate of a human being. The temperature and the heart rate of a patient are easier to measure then other vital signs such as blood pressure. However, these two vital signs give very good information about the health condition of a patient.

The sensors in this project can measure the vital signs without a direct contact to the skin. This is more comfortable for patients and expedites the diagnosis for the medicines. The sensors measuring the vital signs sent their data to a microcontroller that does the necessary data processing. The microcontroller sends the data to a display for visualization. The results are shown and discussed.

Examiner: Prof. Dr.-Ing. Uwe Meier