Biomedical Sensor Evaluation for Integration into a Biofeedback System.

Background

This project is done together with the German Heart Center and Sony. The goal of the project is to research and develop a system that helps children with heart disorders to recover physical fitness after operative treatment. The system uses electronic games to help motivate the children to perform exercise. Playing games will cause the children to perform moves that are supporting the rehabilitation process in specific, predefined ways. The patients' physical engagement is measured by biomedical sensors and used for controlling the intensity and frequency of moves that are stressed by playing the game.

Description

The objective of this project is to evaluate different biomedical sensors that may be used to detect patient conditions and integrate this information into a biofeedback system. The project involves the development of sensor drivers and data visualization.

Programming skills are required, specifically in C++ and preferable knowledge in signal processing and gui design using Qt.

This project is to be developed at the Experimental Heart Surgery Lab of the German Heart Center. (Lazarettstr. 62)

References

- German Heart Center: http://www.dhm.mhn.de/

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