Title: **Extension of a mobile biosignal acquisition system by a wireless data interface and a mass storage device capability**

Abstract

The aim of this diploma thesis was to extend an existing biosignal acquisition system by a bluetooth interface and a mass storage capability to enable further opportunities how the system could be used. To increase the benefit of the recorded data, it should be possible to save the data in the EDF-file format.

As mass storage device for the hardware of this system the SD-card was chosen, because this technology meets the wanted criteria at the best. For simple data exchange the FAT16 file system was implemented for the SD-card. The selection of serial bluetooth modules allowed a good way for the integration of this transmission technology into the hardware of the system.

As a result of this diploma thesis a mobile and portable system is available, which enables a wide range of applications for online and offline analysis of biosignals.

Keywords: EEG, ECG, Biosignals, SD-Card, Bluetooth