Don’t Panic control your smart-phone with 4 buttons

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Description
Don’t Panic allows the user to control almost every Android phone functionality with only four buttons. Designed to work with electrophysiological equipment, it gives a whole new way to interact with the phone.

The Mission
The Four-Button Interface project aims to create a software environment that facilitates the metamorphosis of pure neurophysiology research into helpful clinical neurotechnologies. Towards this aim, an Android application has been engineered that reflects the needs and capacities of a broad population of severely impaired end-users, while simultaneously serving as platform for the conductance of electrophysiology research.

What is the electrophysiological equipment?
At the Technion’s Evoked Potentials Laboratory, a 64-channel electroencephalography (EEG) cap is positioned on the subject’s head with electrodes. Bipolar surface electrodes are additionally positioned on each hand to record electromyography (EMG), and the electrooculogram (EOG) is recorded with electrodes placed bilaterally near the outer canthi of each eye, and one below the right eye.

The cap-mounted and the bipolar electrodes are then connected to an electrophysiological signal acquisition system and the data is processed and analyzed through a suite of algorithms invented by doctoral candidate Daniel Furman.

Features

Phone calls

Music

Games

Magazines

Shortcuts

Quickly activate favorite operations

• Create and assign colored shortcuts to popular operations
• Activate those operations easily from main screen
• Delete and edit shortcuts
• Use assigned shortcuts on multiple ANDROID devices
• Panic! shortcut: sends email alert to the user’s supervisor in case of an emergency.

Collecting Statistics

Access statistics about personal use

• Favorite songs, artists and albums
• Highest scores on snake
• Hit and miss rate when activating a shortcut
• Easy to understand graphs and histograms
• Accessible through an open website

Technologies and Programing Languages

Android
AppEngine
Bluetooth
GWT
RSS
JAVA
MATLAB