

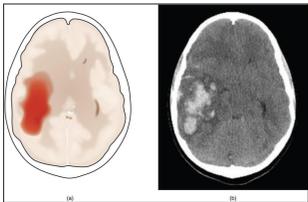


FP7 Coordination and Support Action to fund 50 technology transfer projects (TTP) in computing systems. This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement n° 609491.

Mobile Platform for Real-time Sonification of Movements for Medical Rehabilitation

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TTP Problem



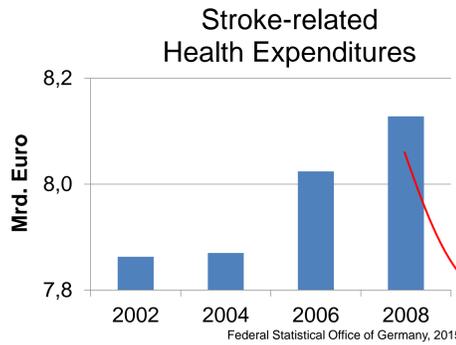
Wikimedia, 2015

A Stroke results in motorical deficits in 55% - 75% of patients



„gesund durch ...“, 2013

Stroke Rehabilitation currently involves 1-on-1 individual care



Major and Growing Relevance for Health Care System
Demographic Change leads to significantly increased number of cases
Rehabilitation is complex, time-consuming and costly
Patient's motivation suffers from effort

≈ 260,000 affected persons

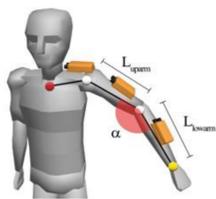
TTP Solution

Novel Concept for Autonomous Rehabilitation Using Auditory Feedback

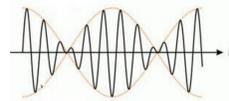
Motion Capturing



Calculation of Kinematic Parameters



Manipulation of Sound Synthesis

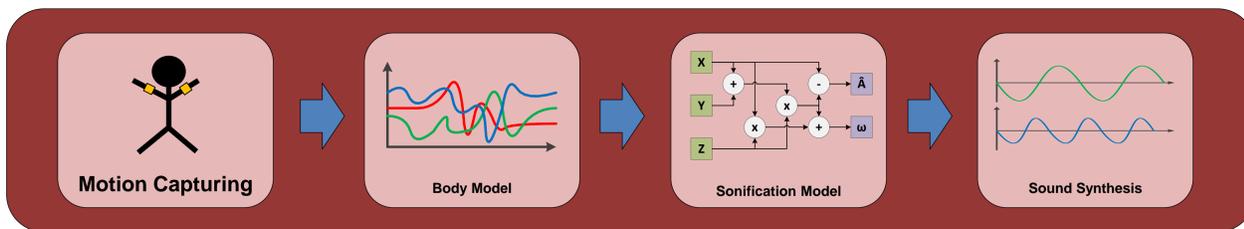


Acoustic Feedback

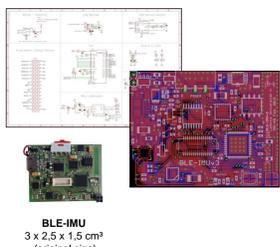


Benefits

- Allows autonomous therapy at home increasing training intensity while reducing rehabilitation cost
- Non-reactive motion capturing
- Distraction-free and intuitive feedback
- Customizable and pleasant audio composition



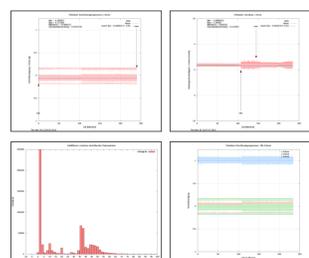
TTP Impact



Custom Motion Capturing Hardware



App for Mobile Devices



Testing



Mobile Auditory Feedback System

TTP Facts

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TETRA COM contribution: 35.000 €
Duration: 01/04/2015-31/03/2016

