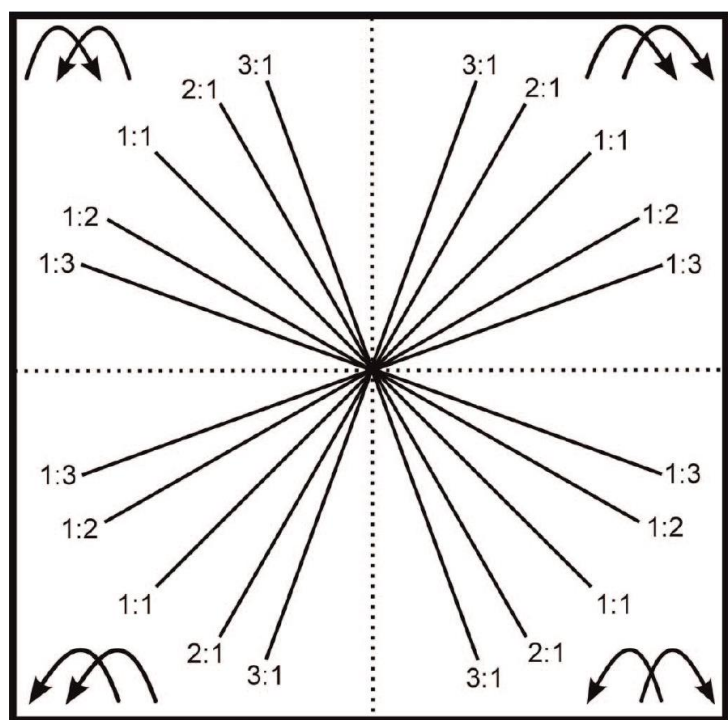# Development and Validation of Data Acquisition Methods for Rehabilitation Purposes

Bart Souverijns

Master of Electronics and ICT Engineering Technology
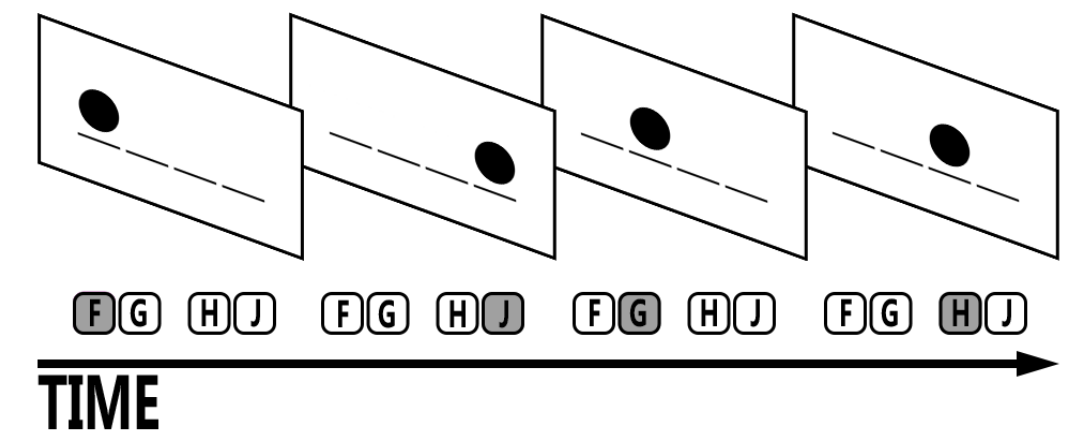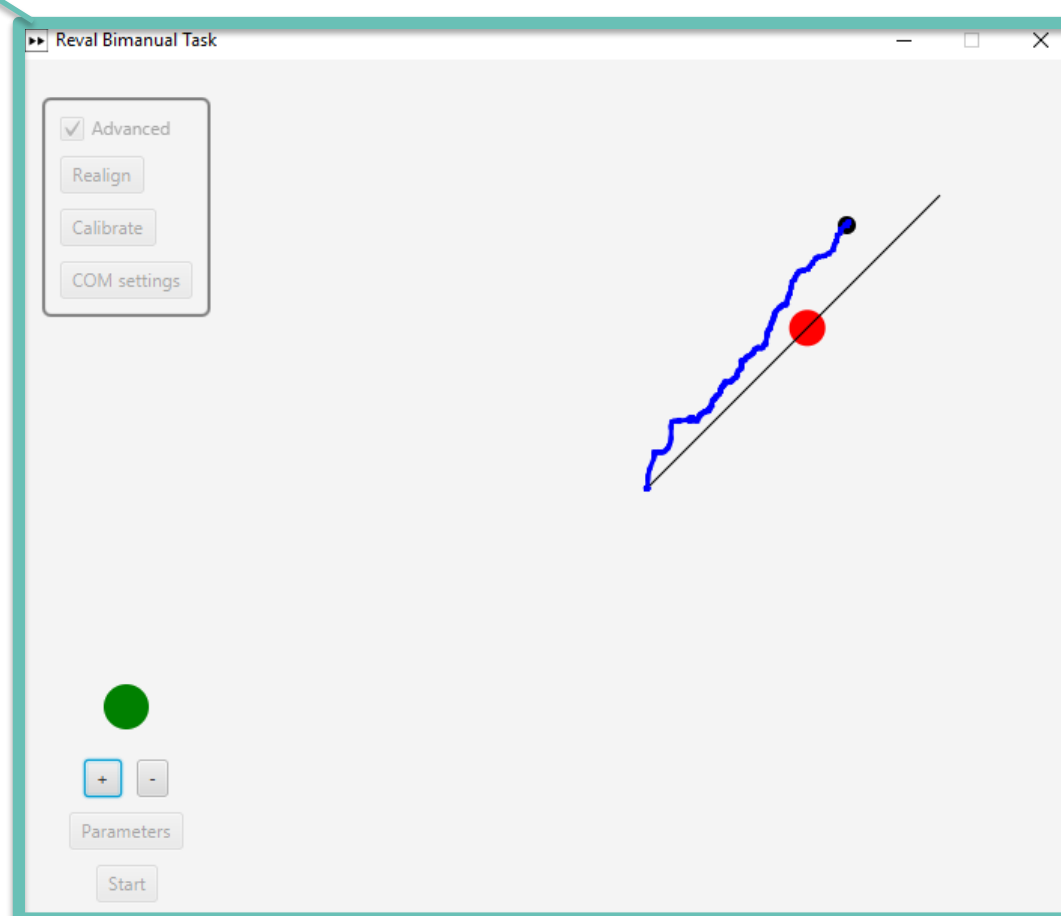
BTT

Introduction

- Research group REVAL performs research into bimanual learning skills and coordination
- Two topics:
  - Development of a bimanual tracking task (BTT)
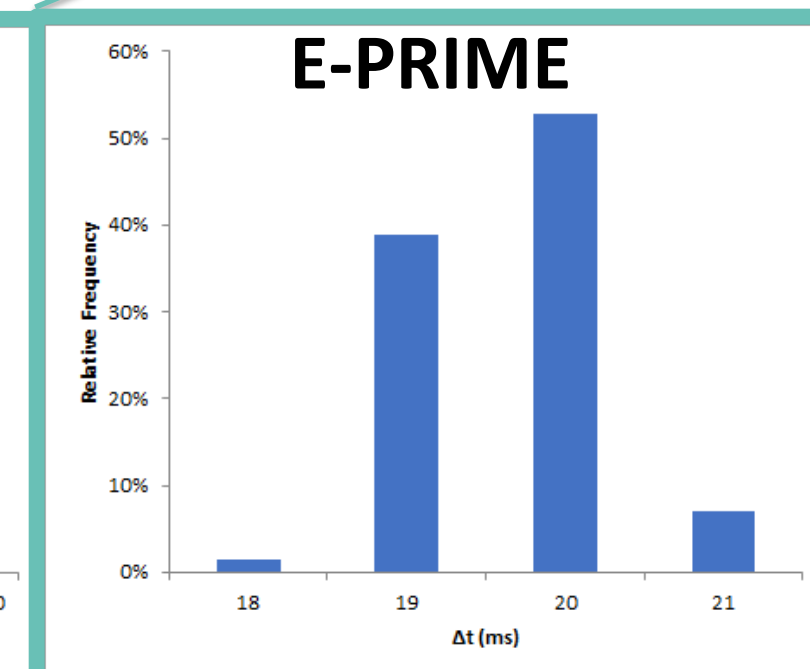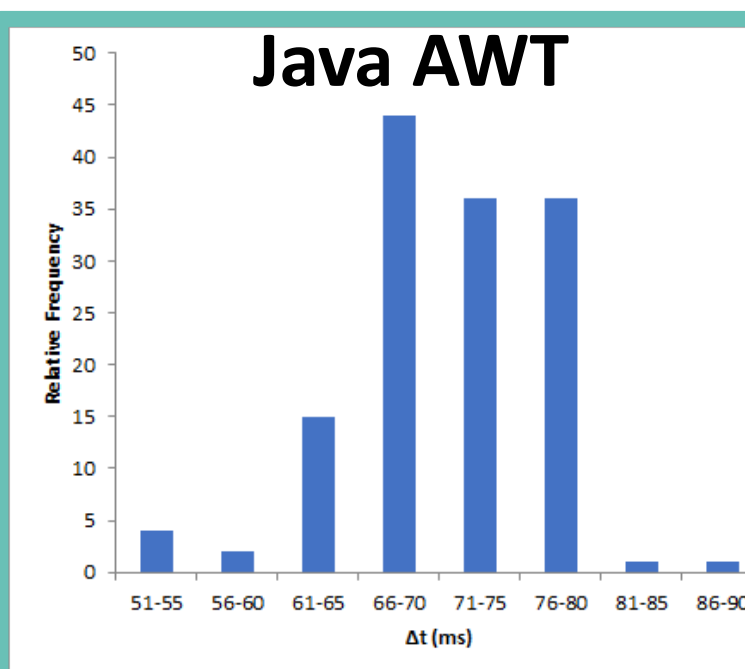 - Validation of serial reaction time measurements (SRTT)

SRTT

Aim:
Participant presses button corresponding to on-screen prompt

Aim:
Participant follows a trail on screen by rotating two controllers

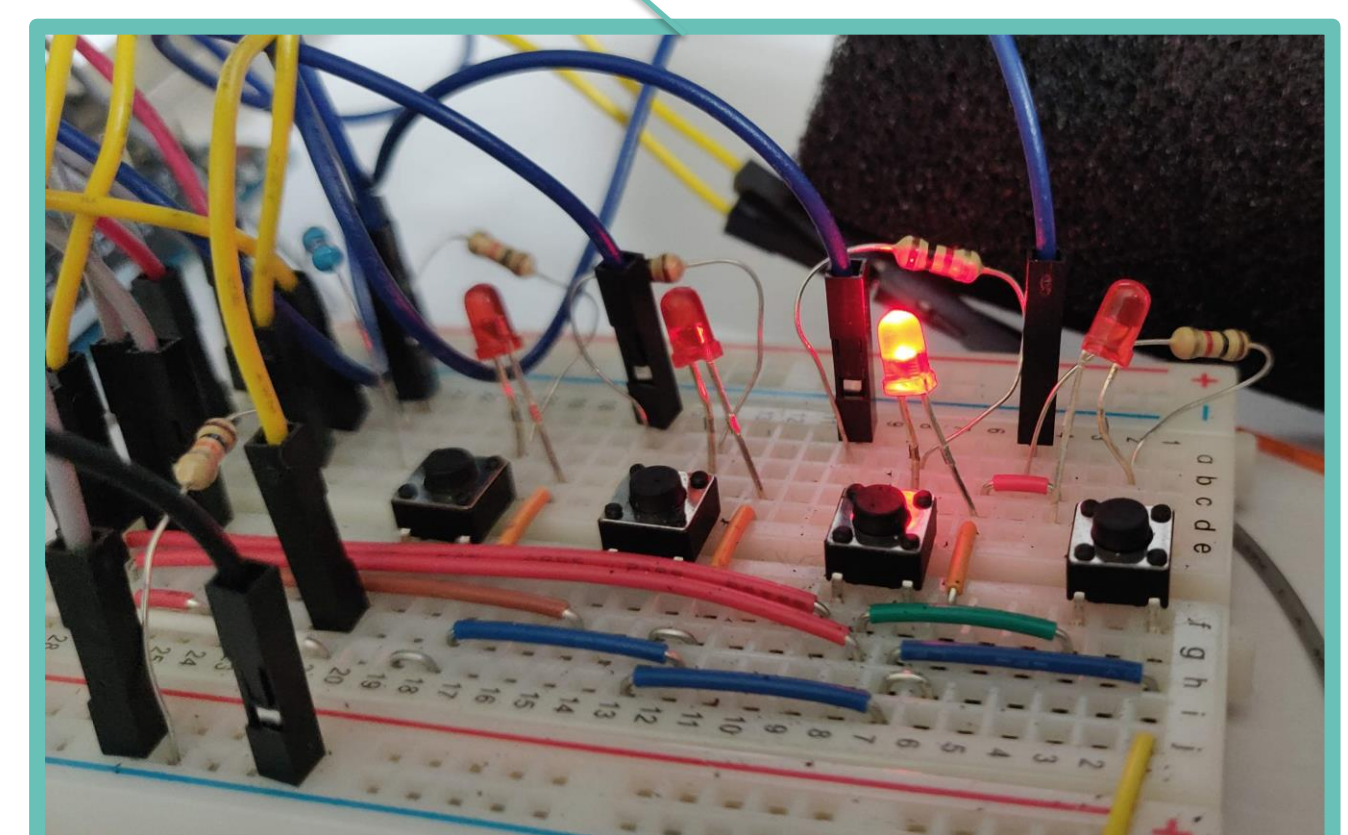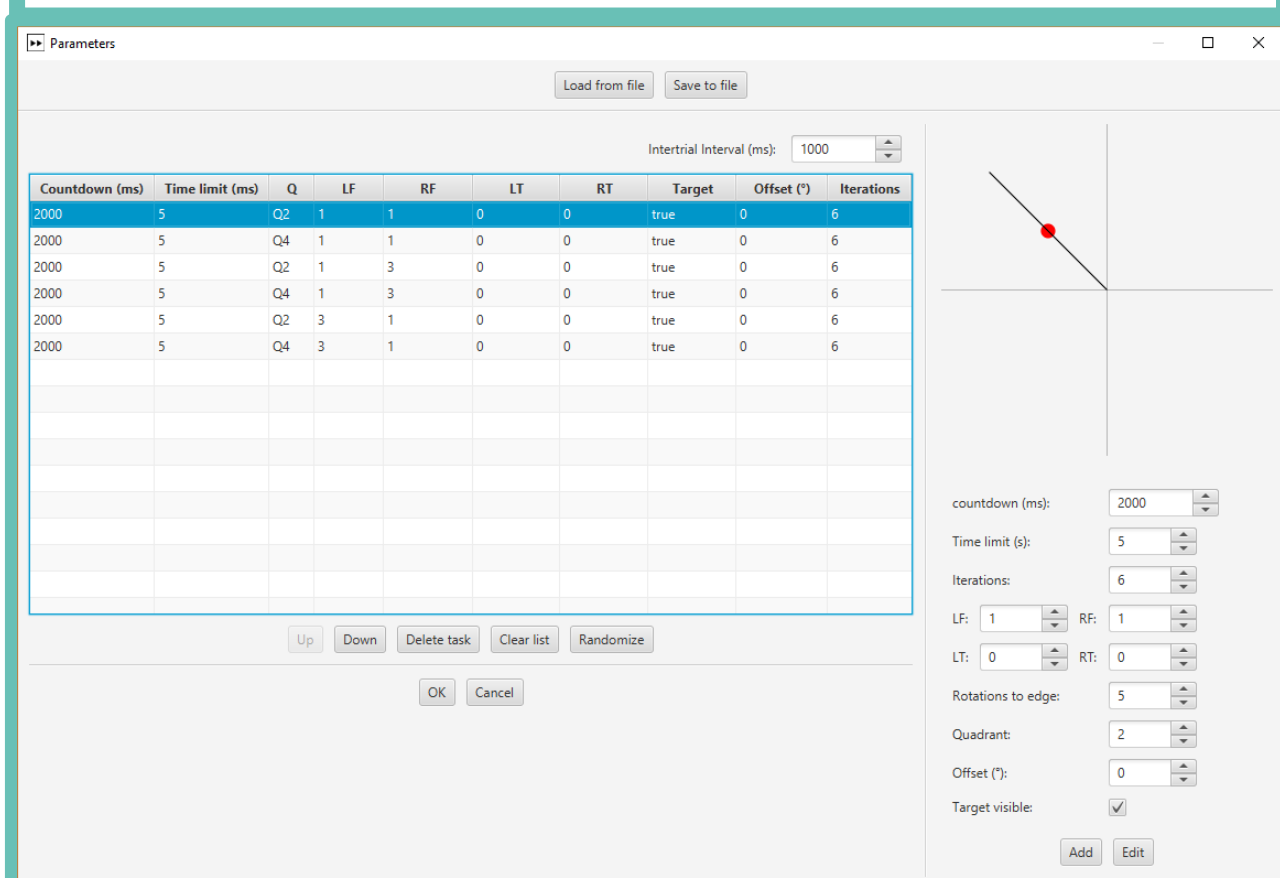**A moving target can optionally be shown**

Java AWT

E-PRIME

Comparison of reaction time measurements:
- E-prime provides variance < 1
  - But 20-30ms mean offset

Parameter entry window
- Permits entry, saving and loading of trial parameters
- Preview of trial parameters

Embedded system implementation of SRTT: sub millisecond offset and variance

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▶▶ UHASSELT

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