Lehrstuhl für Medieninformatik
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# Final Project

Interaction Techniques and Technologies (ITT), SS 2017

Session 19 (13.07.2017), Raphael Wimmer

## Overview

These are slides/notes for the lecture, automatically generated from the slide set. Please extend this outline with your own notes.

### Upcoming topics

- today: final project, questions, example: Jack Schaedler's GRAILS implementation
- 18.7. and 20.7.2017: Undo, Copy&Paste (lecture, experiments)
- 25.7.2017: Summary, outlook, evaluation
- 27.7.2017: Final presentations (FIL)
- 7.8.2017: submission of all files for final project.

### Goals for this and next Week

**Overall:** Learn more about generic interaction techniques and tracking

**Know**

- History and implementation of Undo, Copy&Paste

**Learn**

- using algebra for tracking / transformations

**Practice**

- put all knowledge from this course to work

## Final Project

## 09.1: Design the interactive system

### Choose a task

Design an interactive system for one of the following tasks:

- sketching / notetaking
- previewing and organizing documents or photos
- proxemic interaction[1]

[1] http://grouplab.cpsc.ucalgary.ca/Projects/ProjectProxemicInteraction

- generating music
- modeling / manipulating 3D objects
- any other interesting task, as long as you discuss it with me beforehand

### Choose sensible features

The system needs to fulfil the following requirements:

- the Wiimote is used for tracking something (itself, users, pens) in some way
- the sensor data is preprocessed using adequate filters
- you need to design/implement at least one basic interaction technique for each team member, such as:
  - pattern/gesture recognition
  - copy & paste
  - undo
  - (chording) text entry
  - spatial manipulation of objects (move, rotate, zoom)
  - proximity-dependent information display
  - any other interaction technique, as long as you discuss it with me beforehand
- the system should be cool

### Submission

Hand in the following file:

**system_documentation.pdf**: a short report (less than 10 pages) describing the system, its usage, and its implementation. A skilled reader should be able to re-implement the system based on your documentation. If the team has more than one member, please also document what parts each team member contributed. Please use the official thesis template.

### Points

- **4** The paper describes the system well.
- **2** The paper is visually appealing
- **2** The paper has enough detail to allow replication
- **2** The paper is well written.

## 09.2: Implement the interactive system

### Task and submission

Develop a Python application that implements the aforementioned features. The application should be robust and fast.

Hand in the following file:

**system_demo.py**: a Python script that starts the demo when executed. It should accept a Bluetooth address as command line parameter for specifying the Wiimote to use. Additional files (e.g., media files) may be handed in, too.

### Points

- **6** The application correctly implements all features.
- **3** The application is well documented.

- **3** The application is well-structured and follows the Python style guide (PEP 8).
- **2** The application works robustly
- **2** The application is responsive/fast
- **4** The application is enjoyable and beautiful

# 09.3: Present the interactive system

## Task and submission

Show your system in a short live demonstration (5 minutes) on Thursday, 27.7.2017. Furthermore, create a short video (1-3 minutes) about your system, with a focus on UI, features, and use cases.

Hand in the following file:

**system_presentation.mp4**: a short video that shows all features of your system

## Points

- **4** The presentation showcases a plausible use case
- **3** The presentation is free of malfunctions/problems
- **3** The presenters are able to answer technical questions
- **3** The video shows all features of the system
- **3** The video is beautiful

# Example: GRAILS reimplemented

# ENDE