

Intangible Sandbox Games

Master's Project Digital Media

Winter Term 2018/19

Universität Bremen

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Project Supervisors



Rainer Malaka
malaka@tzi.de

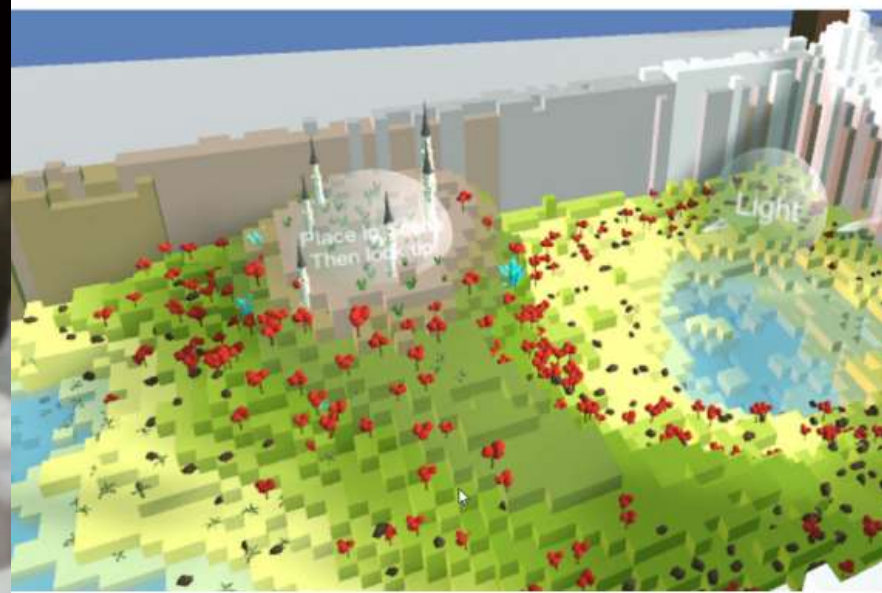
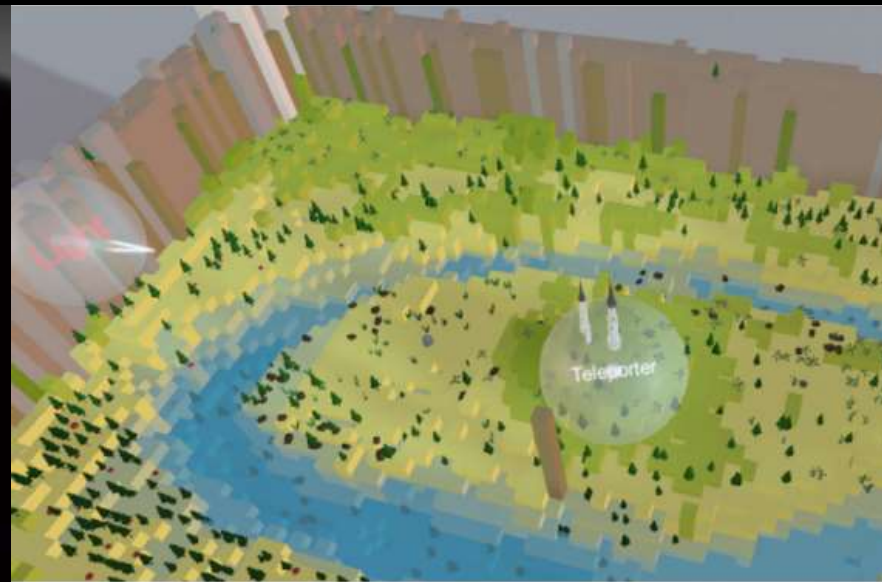


Dmitry Alexandrovsky
dim@uni-bremen.de

Motivation: Tangible Creation



Virtual Sculpting for 3D Modeling



Touchable 3D Modeling

Visual Sandboxes

are fun

allow for embodied interaction

can be used for game level design

allow multi-user-interaction

so allow additional props

sensors and other substrates

clay, dough, ...

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A close-up photograph of a hand holding several thick, colorful sticks of clay or dough. The sticks are arranged in a semi-circular arc, showing a rainbow of colors: red, orange, yellow, green, blue, and purple. The background is a solid, dark blue. The text is overlaid on the right side of the image.

Application Areas / Target Groups

Application Area:

Games and game level design

Architecture

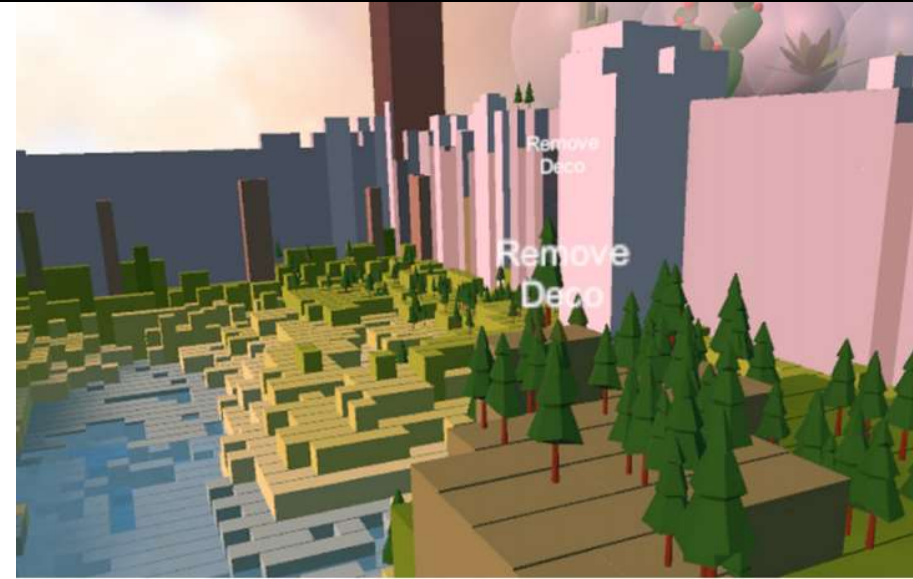
Design

Target Groups:

Professionals, kids, general
audience

Research Questions

- What kind of material is best
- How to do robust tracking
- How to realize VR/AR interface
- Integration of additional controls
- Embedding into (serious) applications



A group of people are silhouetted against a bright sunset sky. They are standing on a dark surface, possibly a beach or a pier, with their arms raised in the air. The sky is a mix of orange, yellow, and blue. The people are of various heights and are wearing casual clothing. One person in the center has a t-shirt that says "ASPIRE SOCIAL CLUB".

Human-Centered Design Approach

Early on: Meetings and discussions potential users

Fast, iterative prototyping

Regular workshops

Many small focus group evaluations for iterating the design

Bigger and controlled evaluations for scientific



Preparatory Course

“Entertainment Computing”

Lecture (6 ECTS)

Summer term 2019

Theoretical and practical
approach

Mandatory for all project
members

Dates & times TBA soon on



Master's Project

Full-time (30 ECTS)

Winter term 2019/20

4 days a week

Oct 19 – March 20

Attendance expected at least 3
days a week

Agile model (SCRUM)

Requirements

Commitment

Enthusiasm for topic area

(Serious) Games, Interaction

Tangibles/Physical Computing

Human-Centered Design

Creativity

Work by scientific method

Willing to research, design,
code, experiment



A photograph of a graduation ceremony. In the foreground, a large group of graduates in black gowns and mortarboards are cheering with their arms raised. In the background, many mortarboards are flying through the air against a clear blue sky. The text is overlaid on the right side of the image.

Learning Objectives

Human-centered research & development

Human-computer interaction, interaction design, natural user interfaces

Computer Game Technology, VR, MR

Physical Computing