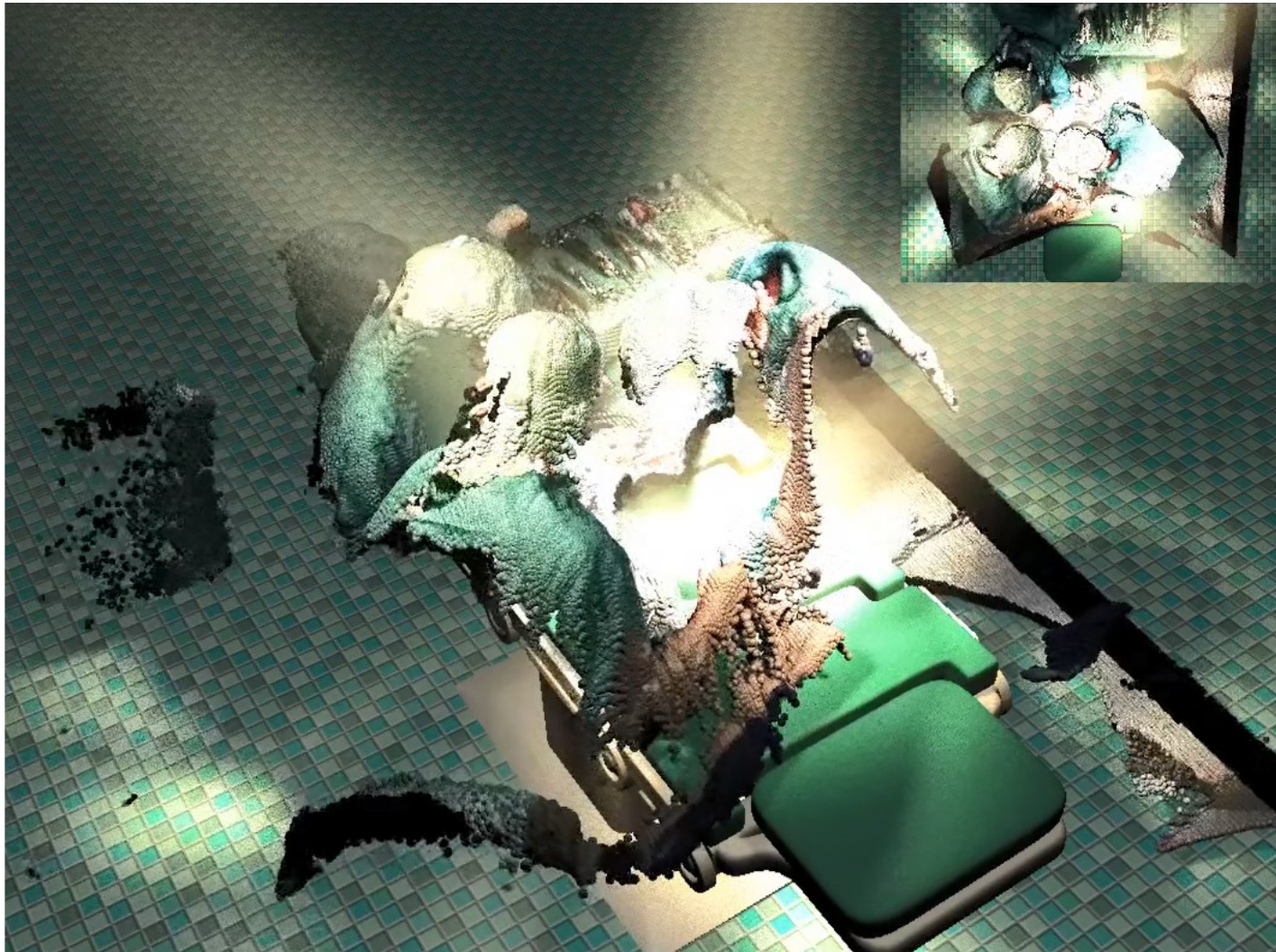


Remote Interaction

M.Sc. Philipp Dittmann & Prof. Dr. Gabriel Zachmann
AG Computer Graphics and Virtual Reality

cgvr.cs.uni-bremen.de

Motivation: Remote Operation



Motivation: Remote Driving



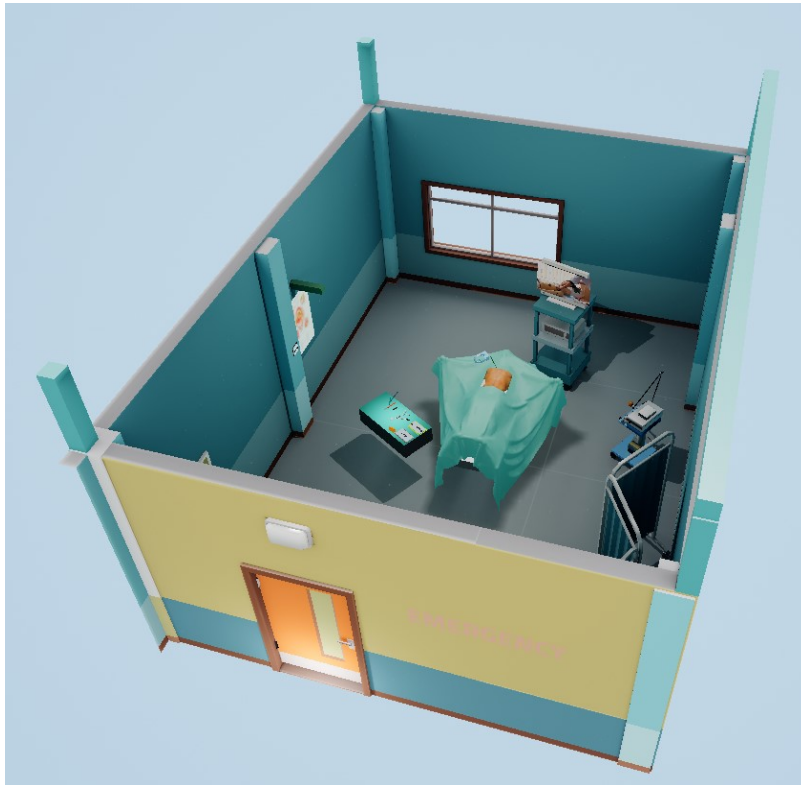
Main Goal of the Project

- Live-Stream large Point-Clouds
 - Recording
 - Fusion
 - Compression
 - Streaming
 - Rendering



Starting Point for Project

- Unreal Engine 4 (designed for game development)
- Operation Room / Car Simulation
- Hand tracking: Leap, Cybergloves

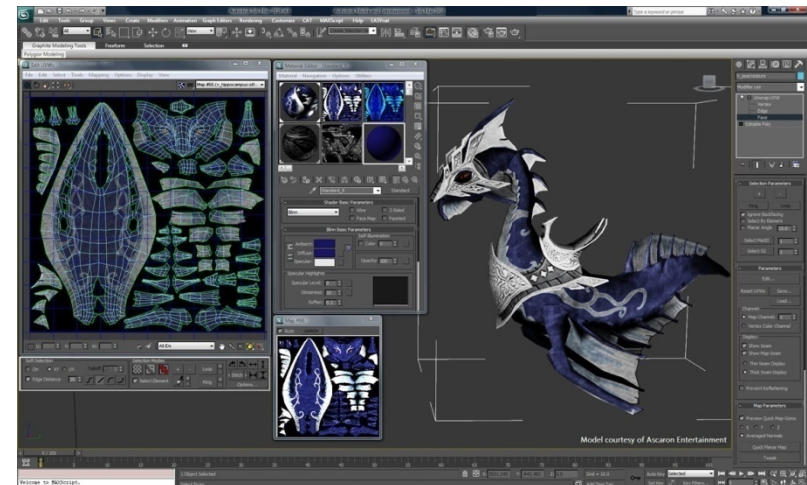


Project Tasks

- Programming:
 - Streaming Point-Clouds
 - Extend Simulation
 - Multi-User
 - UE4 Plugin for Point Clouds



- Modelling:
 - 3D modelling of realistic environment objects, using tools like 3DSMax, Blender, Photoshop
 - Texturing (creating textures, shaders, etc.)



Project Infos

- One-semester
- Winter Term 2019/2020
- Nice to have:
 - A bit of Virtual Reality / Computer Graphics / 3D knowledge
 - e.g. from “Computer Graphics”, “Virtual Reality”, “Advanced Computer Graphics” course
 - A bit of programming skills in C/C++ or modelling skills
 - Commitment!
- The envisioned project team: mix of CS & DM students
- Further info:
 - Place: MZH 3590, 3rd floor, CGVR lab
 - Time: January 28 (Monday), 12:15
 - Great opportunities for master theses subsequently

Ready to dive into another world with us?



**Meet us next Monday
at MZH 3590, 3rd floor**

[Philipp Dittmann: dittmann@cs.uni-bremen.de](mailto:dittmann@cs.uni-bremen.de)