

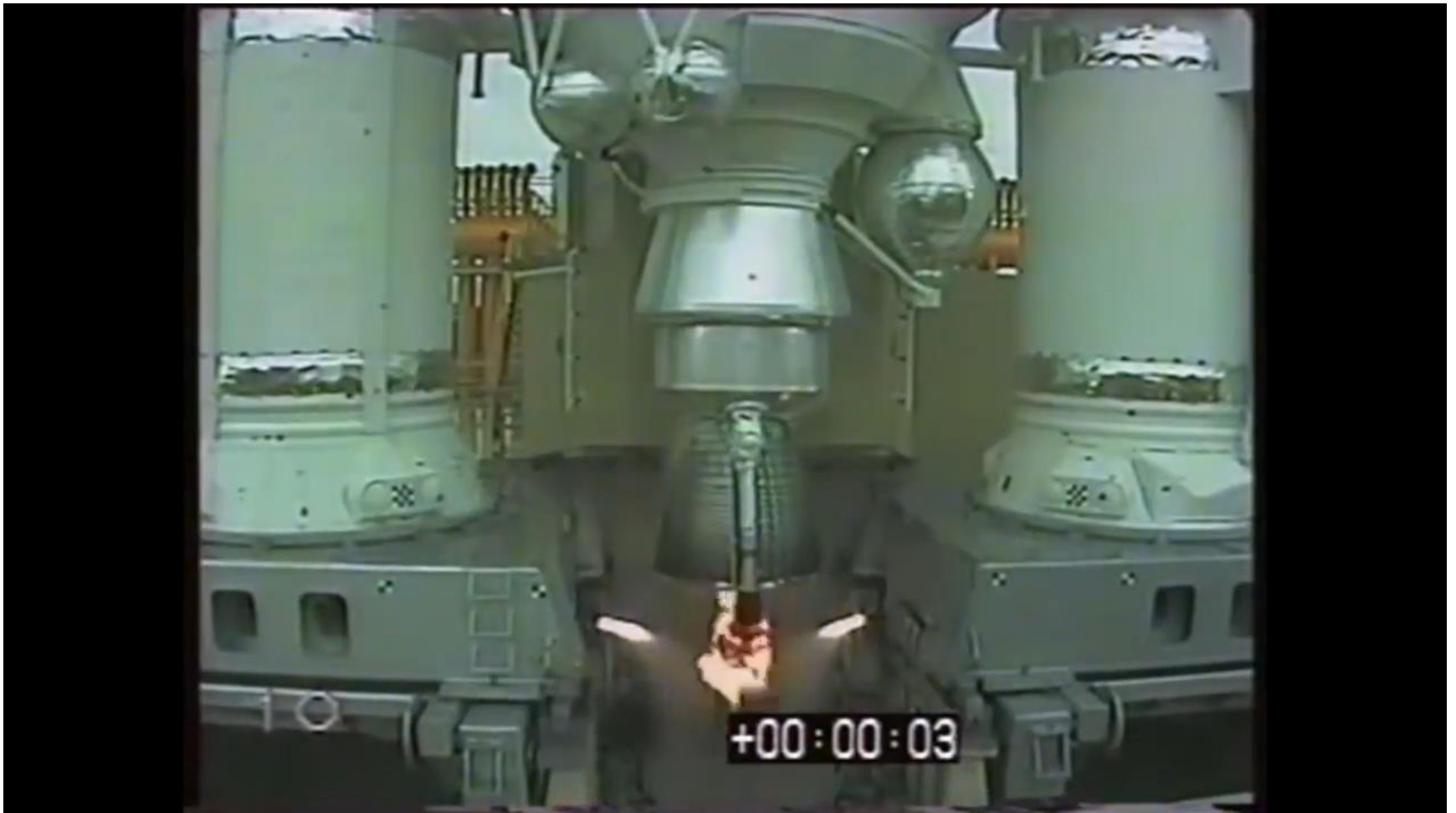


# Virtual Mars Exploration

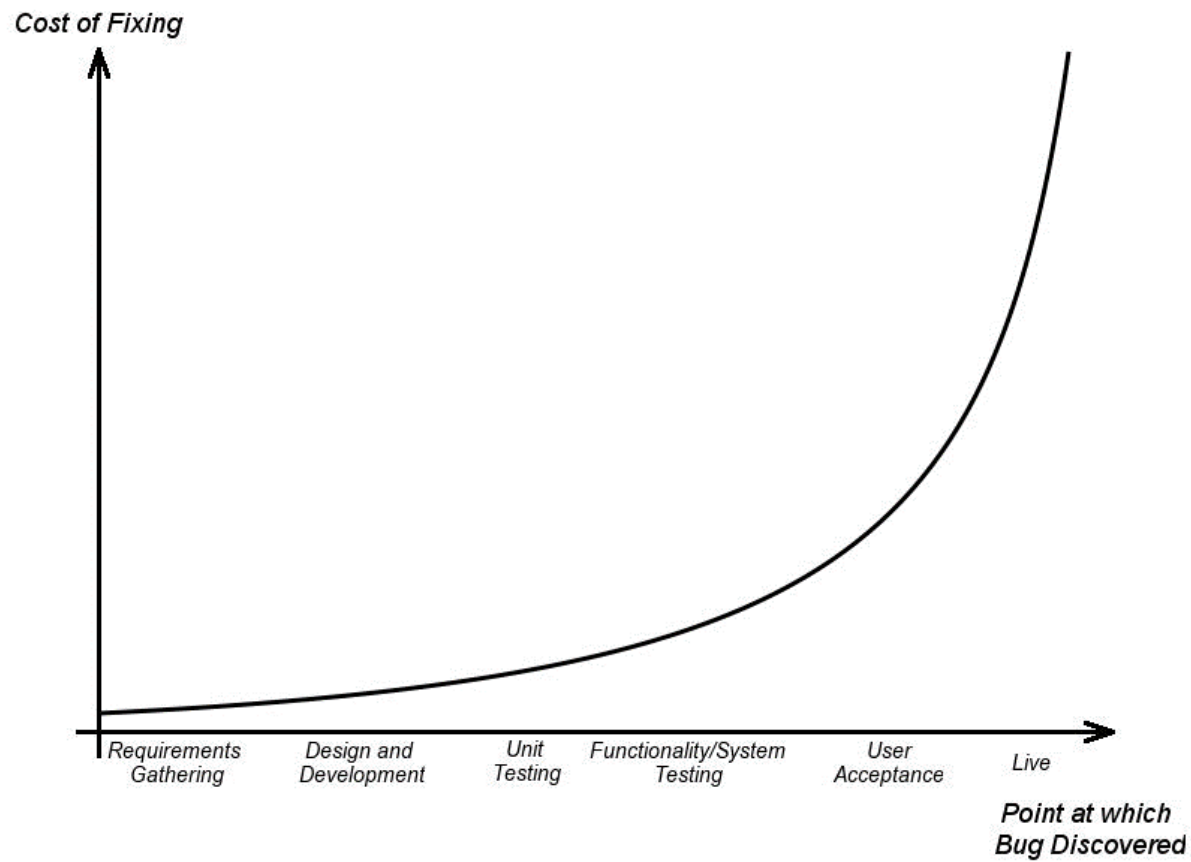


René Weller & Gabriel Zachmann  
University of Bremen, Germany  
[cgvr.informatik.uni-bremen.de](http://cgvr.informatik.uni-bremen.de)

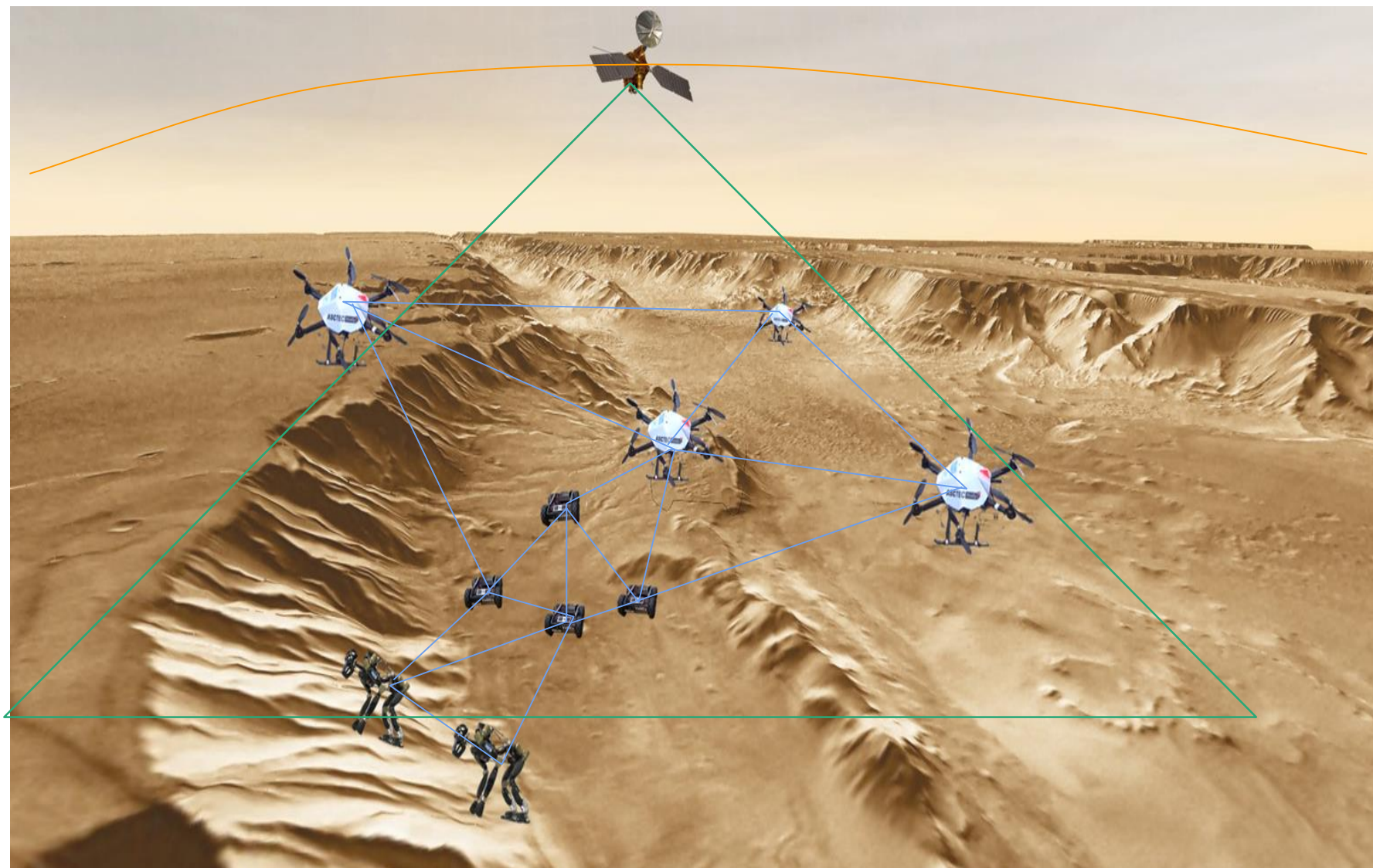
# Motivation



# Motivation



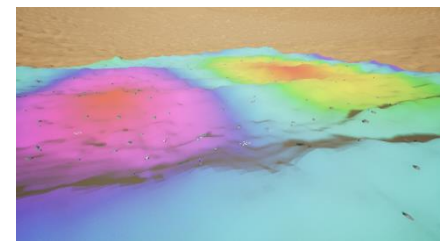
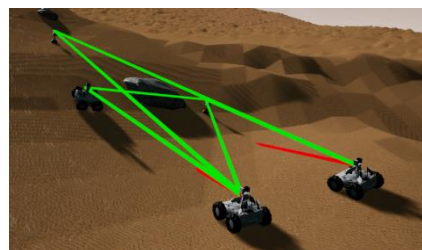
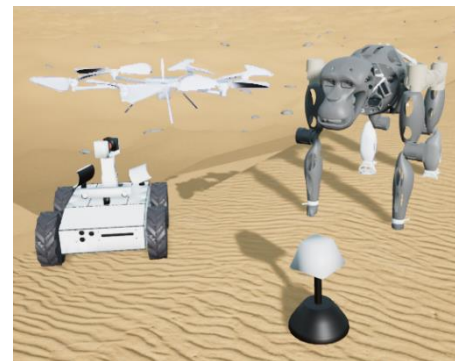
# Background: VaMEx-Initiative



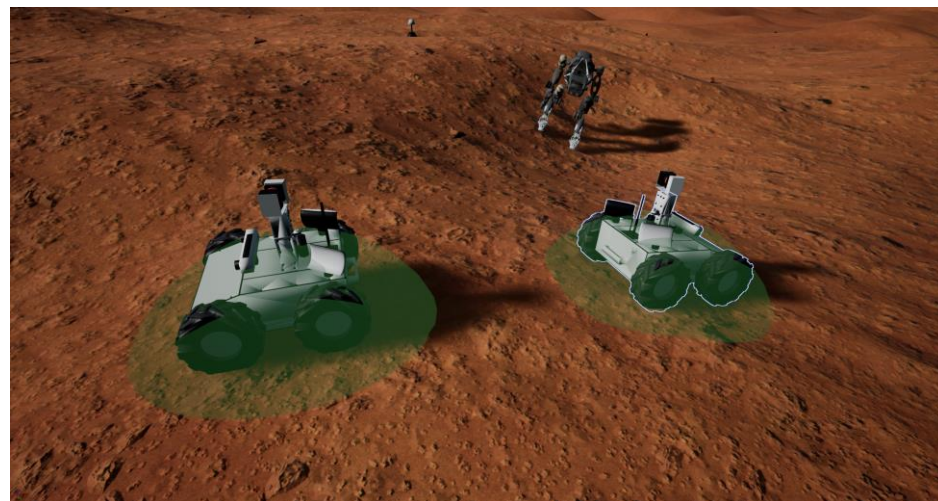
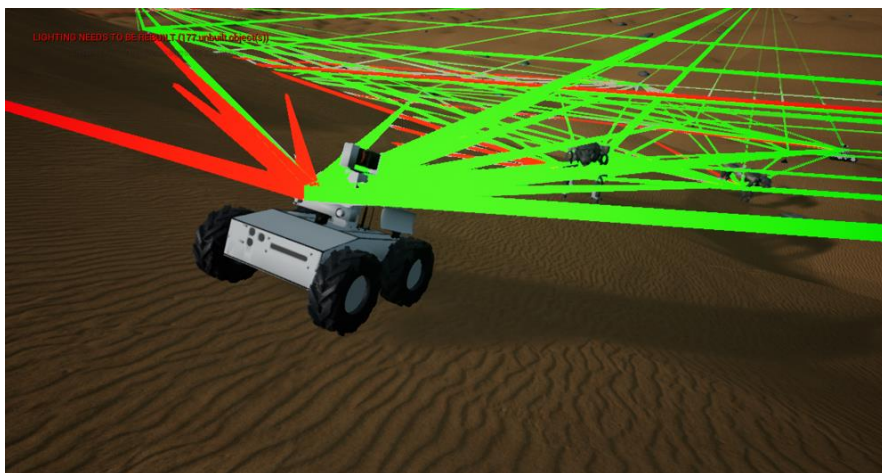
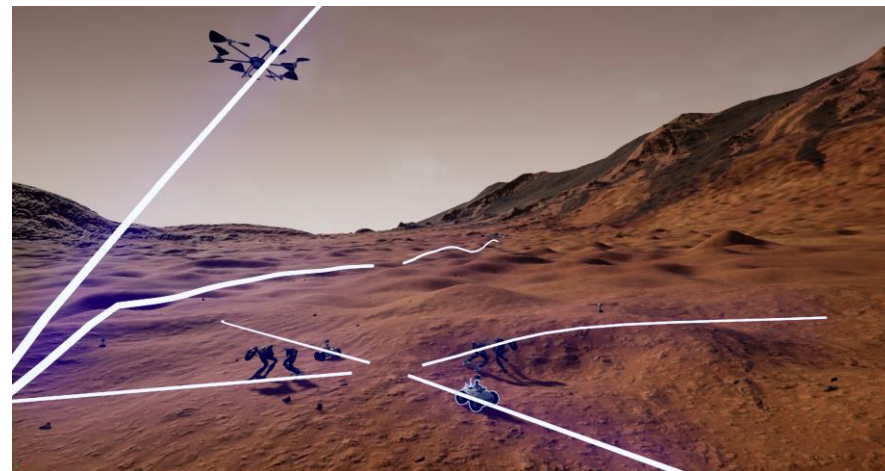
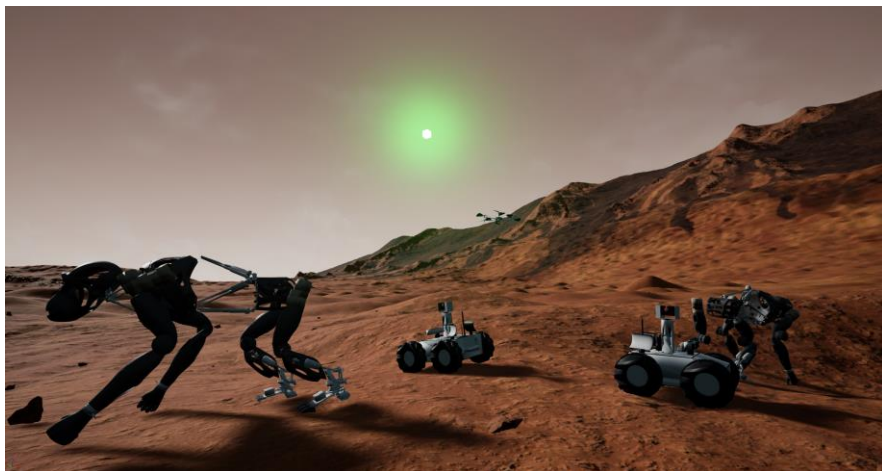


# VaMEx-VTB

- Virtual Testbed
  - Verification and Validation
  - Modular, lightweight, software-in-the-loop
- Integration of all swarm units
- Simulation, Synthesis, Visualization
- Interaction



# Features



Motivation

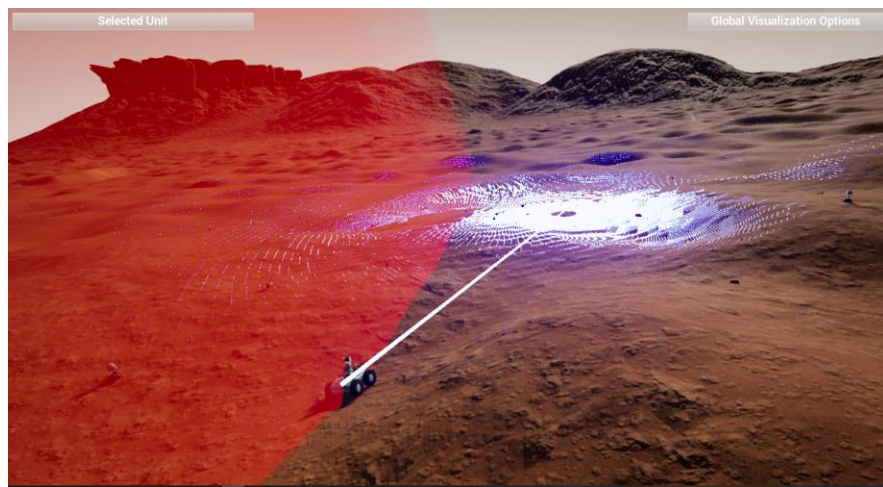
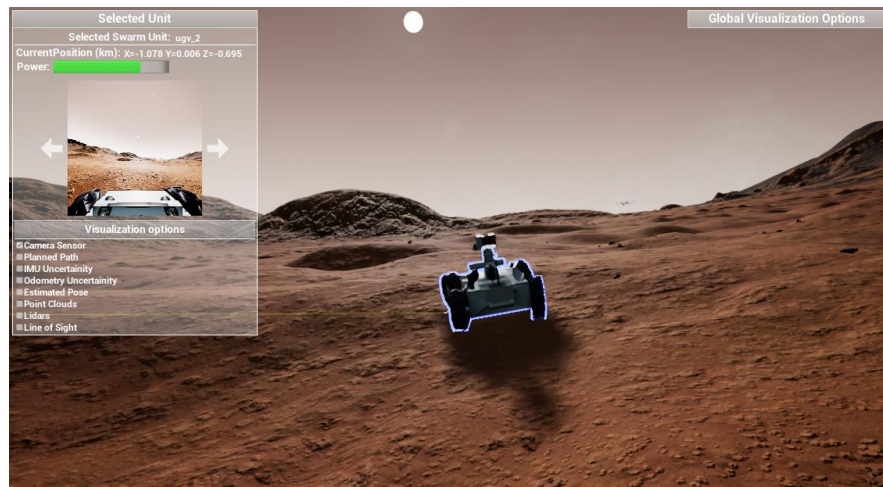
Project Targets

Project Tasks





# Features



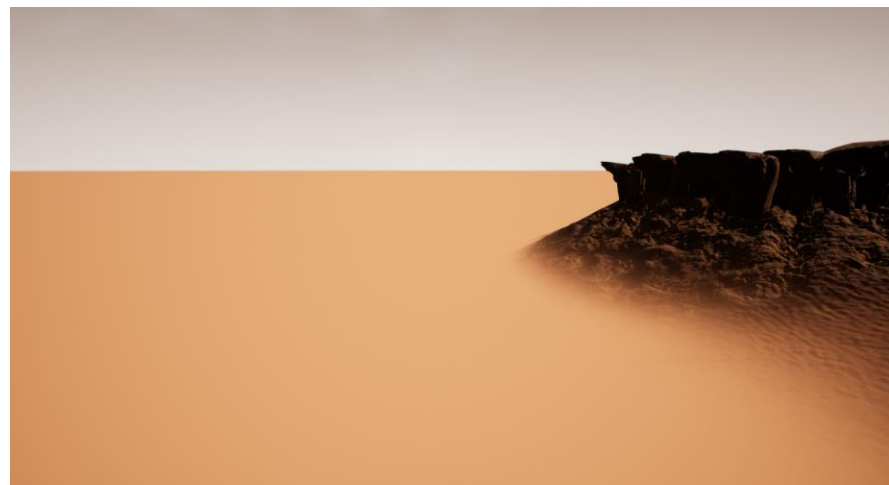
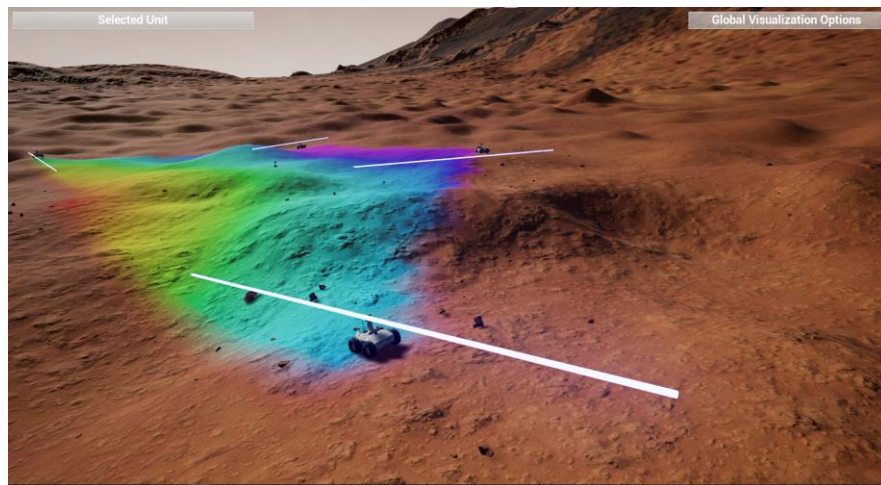
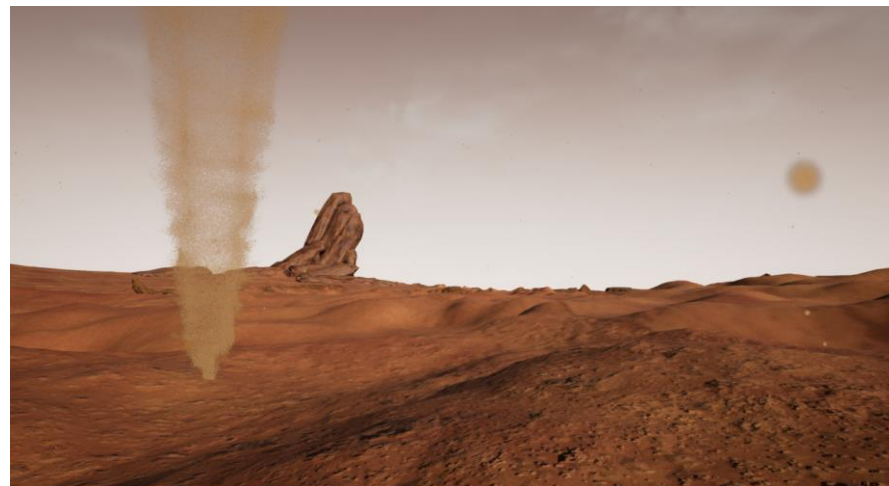
Motivation

Project Targets

Project Tasks

# Main Goal of the Project

- Create a highly immersive VaMEx-VTB Experience



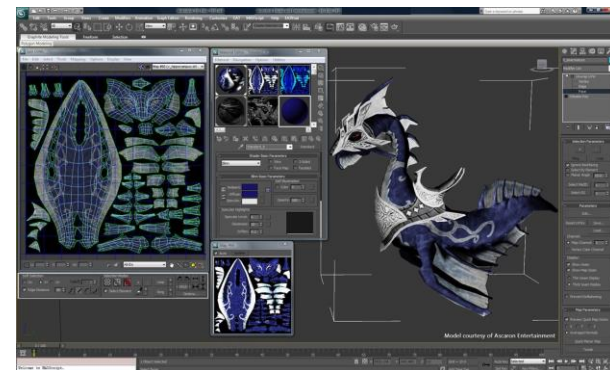


# Project Tasks

- Programming of the VE logic:
  - Interaction with VE
  - Visualization



- Modelling of VE:
  - 3D modelling and animation of realistic environment using tools like 3DSMax, Blender, Photoshop
  - Texturing (creating textures, uv mapping, ..)
  - UI-Design
  - Sound?



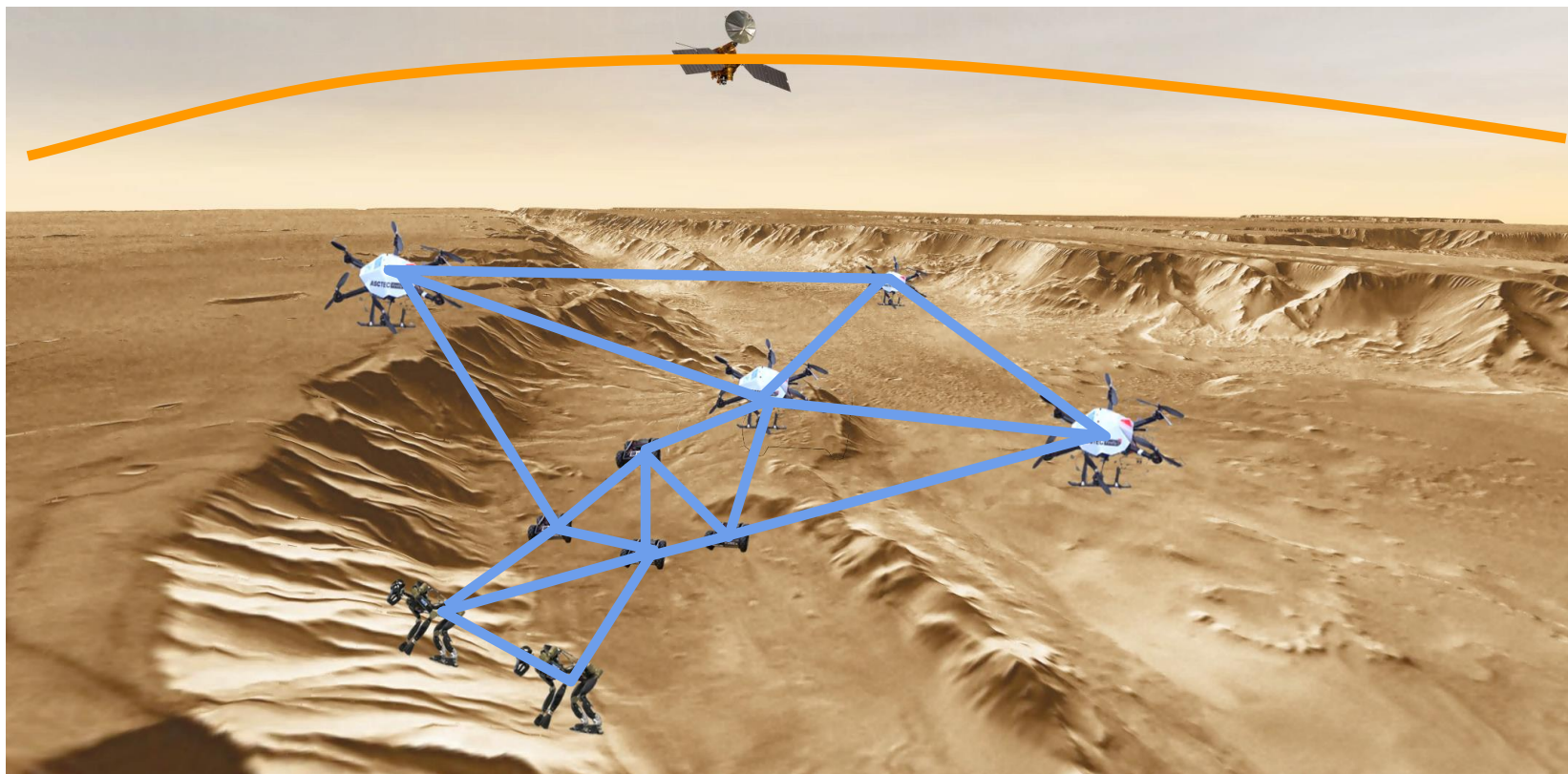


# Project Infos



- **One-semester** project (with regular work in our lab)
- **Summer semester 2020**
- Prerequisites:
  - A bit of computer graphics / 3D knowledge
    - E.g., from “Computer graphics” or “Virtual Reality” course
  - A bit of programming skills in C/C++ and/or modelling skills
- The envisioned project team: mix of CS & DM students
- Further info (Schnuppertermin):
  - Place: MZH 3590, 3rd floor, CGVR lab
  - Time: January 21 (Tuesday), 10:15
- Great opportunities for bachelor theses subsequently

# Ready to dive into another world with us?



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

[zach@cs.uni-bremen.de](mailto:zach@cs.uni-bremen.de)