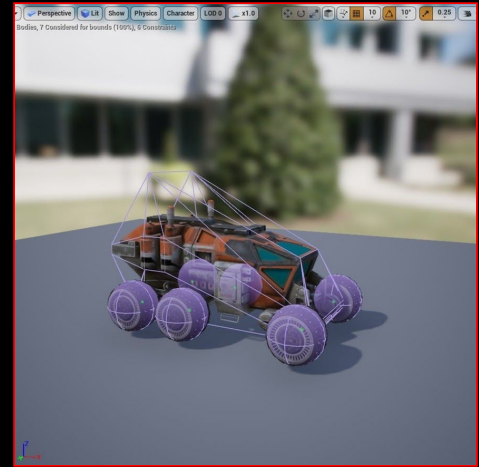




Moon VR - 3D Objects

This project aims at developing 3D objects that will be used in a virtual reality (VR) Moon-like environment.

Laboratory:	SKIL
Number of students:	1
Section:	All
Status:	Available (Spring 2021)



Description of the project

Asclepios aims at organizing an analogue space mission. Therefore, by design, it will take place on earth, where a lot of parameters are different than on other celestial bodies, making it less realistic. This can be an issue for example when the goal is to simulate an EVA and analyze how astronauts would react under pressure, to repair impaired critical infrastructures such as solar panels, etc. The immersion obtained on earth removes an important part of realism from the EVA, which reduces the advantages of a simulated mission. Therefore, this project will be the first step in a larger effort to enhance the "immersive" aspect of the mission, i.e. creating a Moon-like virtual environment analogue astronauts will evolve in during EVAs.

Description of the student's work and mission

The student's mission will be four-fold::

- Using the Unreal engine 3D or Unity to model different objects (e.g. solar panels, a rover, etc.);
- Building these objects in real life using the Skil's infrastructures;
- Creating events involving those objects in VR;
- Superposing 3D objects in VR with corresponding real objects.

In order to conduct this project, the student will need to have strong coding skills (C, C-sharp), be curious & autonomous, and be able to work in a team.

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