

Experimental polygon-based room building prototype for Hotel Hideaway

Project Proposal

1. Introduction

The idea of the project is to develop a standalone tool for creating a 3D room building prototype for the [Hotel Hideaway](#) team. The end product is a Unity-build application, assembled to work on both Android and iOS platforms. In addition, it may possibly be assembled to work on Windows to simplify testing. One explicit usability criterion for the resulting product is the ease of use. The initial scope of the prototype is quite simple and contains: a) building a real-time 3D Mesh, b) introducing intuitive controls to handle the mesh (gizmos), and c) developing camera controls. The scope can be extended.

Please check the early mockup of the prototype following the [YouTube link](#).

2. Project goals

The goal of the project is to verify the feasibility of the idea and to overcome certain known limitations of the earlier versions, such as:

- Nav-mesh Generation, how an avatar could walk between platforms (stairs)
- Seamless UV's between walls (no seams in wallpapers)
- Intuitive editing controls (HARDER THAN YOU THINK)
- Add new corners to the room (EVEN HARDER THAN THE PREVIOUS)
- Have the avatar move around in the generated room (HARD)
- Fake ambient occlusion with vertex colors (ensuring the floors and walls don't feel too flat) (HARDER)
- Place furniture inside the room (SUPER HARD)
- Export data to the game (SUPER HARD)

3. Technologies

- Unity/C#
- GitHub-based infrastructure (VCS, CI/CD, etc.)

4. Requirements for the students:

- Have head, probably hands, and a PC
- Interest in working with Unity
- Interest in working in the gaming industry

Overall, the project is of a medium-to-hard complexity. (Depending on the team's capabilities.)

Extra points for students for:

- Having participated in a game-development hackathon
- Having participated in a game jam
- Have completed a Unity project

Students' takeaways:

- Basics of 3D graphics
- Vector Maths practice
- Unity programming skills
- Some C# programming skills
- A chance to stay for a paid summer internship



5. Legal Issues

Intellectual Property Rights (IPR):

1. The client gets all IPRs to the results.

Confidentiality:

1. The client will share some confidential information with the students, so signing an NDA is required.

6. Client

Sulake is a social entertainment company focused on providing a safe and fun online service for self-expression. Founded in 2000 by a small team of passionate people, Sulake is a social entertainment company focused on providing a safe and fun online service for self-expression through its products, Habbo and Hotel Hideaway.

Dutch media and technology company Azerion acquired Sulake fully from Elisa Oy in January 2021, after being a majority stakeholder since 2018.

In 2018, Sulake launched Hotel Hideaway, a brand new 3D virtual world developed for iOS and Android devices.

Sulake's mission is to enable its users to meet new people, make friends and give them a place to create and share their user-generated content in a fun virtual surrounding.

You will mostly work together with:

- Product Owner (Art Technical Lead @ Sulake)
- [Antti Hamara](#)
- antti.hamara@sulake.com

and

- Technical Specialist/Architect (Senior Game Developer @ Sulake)
- [Lev Bespalov](#)
- lev.bespalov@sulake.com

Other experts will be available on demand. The work can be performed either remotely or from the [office](#). If needed, various mobile devices can be provided for testing purposes.

7. Additional information

The working language is English, but we also speak Finnish, if necessary. The plan is to use adapted Scrum and common industry best practices: code reviews, cloud infrastructure for deployment, etc.