# Project Proposal – Asset Index

## 1. Introduction

The increase of graphical detail in AAA video game development requires creation of tens of thousands of highly detailed assets. Creating such assets is an expensive and a time-consuming process, and thus it is important to be able to reuse them as much as possible.

Since the release of Control, Remedy has been working on multiple game projects simultaneously and scaled our outsourcing efforts to a whole new level, and thus it has become cumbersome for artists in different projects to check what assets are available and which of them can be reused.

To promote the reusability of the assets we have built a solution that allows artists to discover and use the assets between our game projects without having to download the full game projects from the source control with hundreds of gigabytes of data each. However, this solution is not perfect. We are halfway there, but the discovery and organization of these assets still needs more work.

The project will allow the students to experience a sneak peek into the game industry and potentially create a big impact on the workflows for our artists. Highly motivated groups will be able to work on our proprietary tools and engine providing valuable experience for those interested in the game industry.

The scrum master for the project is Ossi Sulkakoski who is currently employed at Remedy. Ossi knows the existing system and can provide the group with expert guidance and organize the use of meeting rooms at the Remedy office in Espoo.

## 2. Project Goals

The main goals of the project are:

- Help artists to discover and categorize existing assets (textured 3D models) more easily
- Help artists to discover and reduce redundant assets in the system

Some of the possible stretch goals are:

- Utilize advanced machine learning/image recognition technologies to achieve the goals

## 3. Technologies

The bulk of the work will involve working on a web application. We already have an existing application in production running the following stack:

- Backend is a .Net Core application (C#) with a REST API
    - Running on Linux
    - Has access to a lot of code from our internal C# tools framework
    - Direct access to Perforce version control system
- Frontend is done with Vue.js
- SQLite as a database solution. Migration to MSSQL probable in the future.

Groups with higher ambitions could also create integration between the web application and our tools and engine, or to improve the web application even further.

- Game Development tools are done in both C# and C++
- Northlight Engine is C++

## 4. Requirements for the students

- Remedy does not provide equipment or facilities for the development, so students must be able to develop on their own hardware. Meeting rooms can be provided on the Remedy premises if the team so wishes
- Basic knowledge of the Git version control system is a must, knowledge of the Perforce version control system is a plus
- Minimum viable product can be achieved with web development basics.
- Interest/skills in machine learning are a huge bonus
- The scope of the project very flexible and can be adjusted based on the skills and enthusiasm of the team
- All code and documentation should be written in English.
- C# and C++ experience are a plus
- Experience of using game development tools (e.g. Unity or Unreal Engine 4) and/or DCCs (e.g. 3ds Max, Maya or Photoshop) is a plus.

## 5. Legal Issues

Intellectual Property Rights (IPR): The client gets all IPRs to the results.
Confidentiality: The client will share some confidential information with the students. Signing NDA **provided by Remedy** is required.

## 6. Client

We have allocated time from our other personnel to assist the group regarding programming, UX and mapping out the requirements from our artists. Remedy will provide a basic development infrastructure for the team. Meeting rooms at the Remedy office can be utilized by the team for collaborative work if the team so wishes.

### Remedy Entertainment Plc

Remedy is a Finnish video game developer known for games such as Max Payne, Alan Wake, Quantum Break and most recently Control. We are based in Espoo and Stockholm and currently employ around 300 people. We're currently working on multiple game projects using our proprietary game engine called Northlight and one game project utilizing the Unreal Engine.

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