

Capstone Project 36:

Virtual Reality Livestream

List of Deliverables

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Change Log

Date	Author	Location	Change
2020-02-09	KG	Non-Technical Deliverables	Updated NTD3 to include method of source code transfer
2020-02-09	KG	Technical Deliverables	Removed “360 Degree Video Server” deliverable and merged this functionality into TD1.
2020-04-08	KG	Technical Deliverables	Update the “Unity Example” deliverable

Technical Deliverables

- **TD1 - Unity Plugin (in a .unitypackage format)**

A plugin for the Unity game engine that can be integrated into existing or future Unity projects, and performs the following tasks:

- Extracts and encodes a 360 video from the active Unity scene.
- Serves the 360 video to connected clients using networking protocols

- **TD2 - Unity Example Scene**

A sample Unity project that is integrated with the Unity Plugin. This will demonstrate the capabilities, defined in the requirements document and will be the project that will be internally used for validation.

The example project will support the most commonly used VR functionalities used by EML in their projects. They are outlined below:

- 360 degree field of vision
- VR locomotion (the user can move around the scene by using their controllers to teleport)

- **TD3 - Integrated Video-Playing Platform**

A platform that is capable of receiving and displaying a 360 degree video, while allowing the user to equip a VR headset to look around the 3D world of the video.

Non-Technical Deliverables

- **NTD1: Capstone Project Video**

A short (90 - 120 seconds) video that provides a high-level overview of the problem and the solution, as well as a short demonstration.

- **NTD2: Unity Plugin Integration Instructions**

An instruction manual for developers that contains instructions for how to integrate the Unity plugin with other Unity projects.

- **NTD3: All Relevant Source Code**

All source code files that are needed to build or maintain the solution. This will be accomplished by transferring ownership of the remote repository hosting the project files.

- **NTD4: Validation Document**

A document that gives an overview of all tests completed to validate the solution, as well as any tests that were not completed due to time constraints.

- **NTD5: Design Document**

A document that outlines the final solution design and supplies justification for all design decisions.

- **NTD6: Requirements Document**

A document that lists all requirements for the solution that have been discussed with the client.

- **NTD7: User Manual**

A short manual that will guide users (students and instructors) on how to use the VR livestream solution.