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TERMS OF REFERENCE

Team Project & Professionalism KV6002

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Contents

[ **Project Vision** 0](#_Toc867780)

[ **Team System Specification – Requirement Capture & Analysis** 1](#_Toc867781)

[ **Specification of Main Functional Sub-Components** 2](#_Toc867782)

[ **Project Tasks and Deliverables** 3](#_Toc867783)

[ **Legal, Social, Ethical and Professional dimensions** 4](#_Toc867784)

[ **Costing** 5](#_Toc867785)

[ **Subsystem Specification** 6](#_Toc867786)

# **Project Vision**

Our project vision is to produce a VR System for an immersive forensic virtual reality experience to emulate crime scenes for forensic investigation. For this project we are working with external consultants from the social sciences department of Northumbria of which are interested in a proof-of-concept for educational purposes. Therefore we intend to develop a 3D virtual reality crime scene environment where users can navigate and interact with the scene. The user will be uncovering a story developed by the group to examine the crime scene while using the Oculus VR headset to interact with various objects. A challenging aspect of this project is to create an accurate crime scene which feels natural for the user to navigate around while also being a notable educational tool. By using the Oculus VR headset coupled with Unity3D we can immerse the user using the latest advances in virtual reality technology. Using this latest technology we can introduce new ways of user interaction to move around and interact with objects such as bodies, weapons and other evidence related to a crime scene. We will be working and consulting with the Social Sciences Department of Northumbria University in this project. In this team project we have 5 members collaborating on assigned tasks. As a group we are ensuring that we can:

* Produce a system that has educational value to the social sciences department using existing hardware.
* Produce an application which feels natural and immerses the user in the environment
* Produce a system which runs in real-time with acceptable performance
* Brief overview of what you are doing for your subsystem

**Group member, Luke Rose, will……**

**Group member, Ana-Sabina Irimia, will……**

**Group member, Hassan Mohammad, will……**

**Group member, Zoe Irwin, will……**

**Group member, Efsthathios Efsthatiou, will……**

* Establish which group member is clearly responsible for which area
* **Address the sub-components with relevant research**
* **E.g. looking at literature for user interface systems in VR**

# **Team System Specification – Requirement Capture & Analysis**

* Aspects of this are likely to be non-functional for example choice of architecture, look and feel, security, etc.
* Sources of requirements should be clear and defined
* Outstanding and quality research practice (reference code of conduct)
* Fact Finding plan could be used/ Literature review
* Analysis of existing products such as (Conway, James, & Gladyshev, 2015) Virtual Crime Scene Simulator has provided our project with different elements for the requirements capture. For example, the paper discusses how they aim to create a virtual crime scene while preserving a realistic simulated experience. From this we intend to build a similar virtual reality application that immerses users into a 3D interactive environment in which the evidence is used as an educational tool for university students. In addition to utilising requirements based on existing software and we have consulted with our external client from the Social Science Department
* ^^ The above can help with requirements capture

# **Specification of Main Functional Sub-Components**

# **Project Tasks and Deliverables**

* Requirements capture
* Analysis and design
* Systems build
* Approach to testing
* Configuration Management/Integration
* Main Deliverables are Project Application and Documentation
* Agile approach will be used, ensure that the product is always in a working state
* Resources include Oculus VR headset, Unity3D software package, Git & Github Repository, C#?????????????, In-House Coding Style Guide
* Black Box, White/Glass Box Testing
* End User Testing
* Risk Analysis
* Project Plan (Gantt Chart?)

# **Legal, Social, Ethical and Professional dimensions**

* Fully Licensed and Legal Software (Agreed to End User License Agreements(EULA))
* Licensed Assets to use
* Cite references when used in documentation
* Our Project application should consider an age limit to consider social issues
* How will our project go about being used as an educational tool, will it be an effective educational tool???????????

* Blood and Gore is a reality of forensic crime scenes so we need to consider the ethical issues surrounding this such as disclaimers and age ratings
* Motion sickness from VR headset is a possibility and needs a disclaimer for users
* Plagiarism is another issue with citing work and using external assets for environment
* Ethical issues surrounding death and taking extra care with graphic scenes and descriptions found in forensic crime scenes
* No physical risks are found in our project
* Do not discriminate against types of people in both the development of the application and working as a team on the project ( annotations)
* Do not cause harm to others
* Back up the work and manage versions
* Maintain professional attitude with client
* High quality work and effective time spent on work
* Only use resources authorized to use either by group, university or supervisor e.t.c.
* Stay on top of laws and legislation relating to the work
* Maintain that work is well presented
* Honour agreements, contracts and responsibilities placed upon the group
* Maintain a consistent style across all documentation

# **Costing**

* Cost of working on the project for each team member
* Cost of equipment e.g. Oculus VR headset, Desktop PC’s e.t.c

# **Subsystem Specification**