

Project Deliverable E – Group 12
Design Criteria and Target Specifications
GNG 1103 - Engineering Design
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Ella Siegner

Zahra Atrakchi

Zhaojie Bao

Mohammad Abu Khater

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1.0 Introduction

Our objective for this deliverable is to complete a list of all the things we need in our design along with including more details about prices and sourcing information. The ideal design we thought of takes place in an abandoned city that is destroyed by autonomous weapons, where the player arrives in the city after taking a vacation, where they didn't have any way of communication outside of their vacation. The user will be faced with the new changes that happened to the city.

2.0 Detailed Design Drawing



- Metal sheets are put in windows to stop the signal from getting through.

- Safe house surrounded by sandbags.
- Buildings are covered with scrap metal to protect themselves from being seen through windows.
- Everyone in the city is away inside building.


3.0 Outline Plan- Prototyping and Testing

Tasks	Date of Testing and Duration of Testing	Responsibility	Risks
Is the products virtual reality world portraying the message we want?	<ul style="list-style-type: none"> - March 31st - Testing will take 30 minutes. 	All group members will be responsible. This will happen in final meeting before design days.	<p>A risk could be that a group member may have added something other group members don't agree on.</p> <p>This is a minor risk since throughout working on the virtual world we will always contact one another and express our concern if anything is incorrect.</p>
Ensure the player can move properly	<ul style="list-style-type: none"> - Beginning and Ending of March (no specific dates yet) - Testing will take 30 minutes or less. 	This will probably happen on a lab day with TA's and whichever of us can go with the TA's and see how it works with headsets can approve for us.	Minimum risk since we can easily ask TAs at the lab to help us fix any problems. Plus, we will be doing this twice.
Sound Effects Integrated	<ul style="list-style-type: none"> - March 11 	All group members in our last deliverable meeting will test this	Minimum risk since we will test this out a while before design

	<ul style="list-style-type: none"> - Testing will take 30 minutes. 	<p>out since we all are meeting for the deliverable.</p>	<p>day and this task is easily tested.</p>
Scene Runs Smoothly	<ul style="list-style-type: none"> - March 31st - Testing will take 30 minutes. 	<p>All group members again since we need to have final product finished. On final meeting before design day.</p>	<p>A risk could be that glitches or dysfunctionality of the software.</p> <p>This is a significant and possible risk since we won't have TAs with us, and internet problems can arise.</p>
Is length of video 30s-45s?	<ul style="list-style-type: none"> - March 31st - Testing will take 30 minutes. 	<p>All group members will be responsible.</p> <p>This will happen in our final meeting before design days begin.</p>	<p>A risk could be that we may not have enough time to shorten the video before design day just in case it may be too long.</p> <p>However, this is a minor risk since we probably will not be going over time limit.</p>

4.0 Budget

System Part/Ce	Detailed Design	Costs
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pt Dr aw ing		
Tra sh on the gro und	 https://assetstore.unity.com/packages/3d/trash-low-poly-cartoon-pack-66229	0
Cit y blo ck	 https://assetstore.unity.com/packages/3d/environments/free-open-building-112907 https://assetstore.unity.com/packages/3d/environments/urban/brick-house-74214	0
Sa nd ba gs	 https://assetstore.unity.com/packages/3d/props/exterior/realistic-sandbags-95964	0

cars	 <p>https://assetstore.unity.com/packages/3d/vehicles/land/low-poly-vehicles-pack-26707</p>	0
alarm	<p>https://uottawa-my.sharepoint.com/personal/zbao104_uottawa_ca/_layouts/15/guestaccess.aspx?share=Ee57X-gEw-tOmC9IYfx8v5cBZn7Pwf7CS4UMzdQIRZYbTA&nav=eyJyZWZlcnJhbEluZm8iOmsicmVmZXJyYWxBcHAIoiJPbmVEcmI2ZUZvckJ1c2luZXNzliwicmVmZXJyYWxBcHBQbGF0Zm9ybSI6IldlYiIsInJlZmVycmFsTW9kZSI6InZpZXciLCJyZWZlcnJhbFZpZXciOiJNeUZpbGVzTGlua0NvcHkifX0&e=aJbyXY</p>	0
Street pack	<p>https://assetstore.unity.com/packages/3d/environments/urban/low-poly-street-pack-67475</p>	0
Bomb noise	<p>https://uottawa-my.sharepoint.com/personal/zbao104_uottawa_ca/_layouts/15/guestaccess.aspx?share=EapvkZbagAtBlkeFPisJ1RYBm5WShG_OrCXhSpojhAJtNw&nav=eyJyZWZlcnJhbEluZm8iOmsicmVmZXJyYWxBcHAIoiJPbmVEcmI2ZUZvckJ1c2luZXNzliwicmVmZXJyYWxBcHBQbGF0Zm9ybSI6IldlYiIsInJlZmVycmFsTW9kZSI6InZpZXciLCJyZWZlcnJhbFZpZXciOiJNeUZpbGVzTGlua0NvcHkifX0&e=g8SK8T</p>	0
Other	<p>If any need to buy</p>	N / A

items		
Total		0

5.0 Equipment

To create a unique and exciting world in VR a combination of software and hardware is needed. Software is used to create the world itself and hardware helps show this creation to the viewer.

5.1 Software

Software	Description
Unity	Game designing
Onshape	2D and 3D image modelling
Audio addition package	Sound

5.2 Hardware

Hardware	Description
Headphones	Music/Audio
VR Controllers	Movement
VR Headset	Sight

6.0 Conclusion

In summary, the deliverable outlines objectives, detailed design drawings, testing plans, budget, and equipment requirements for a VR project set in an abandoned city. The detailed design includes measures like metal sheets on windows and sandbag-surrounded safe houses. The testing plan addresses risks and responsibilities for ensuring the virtual world conveys the intended message. The budget details costs for assets, with the total currently at zero. The equipment section highlights necessary software (Unity, Onshape, audio tools) and hardware (headphones, VR controllers, VR headset). Overall, the plan demonstrates a well-organized

approach to developing an immersive VR experience, considering design details, testing, budget, and equipment needs.