Deliverable E

GNG 1103-B
Submitted by: Group 4

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1 Introduction

According to the latest client meet, we were able to clarify some logistical questions that we had pertaining to the project; we presented an outlined design of the project and shared our top three designs that were conceptualized during Deliverable D. According to the client's feedback, the platform has a bottom line purpose which is the least viable solution, and everything that is additional will be added to that base interface. This deliverable will outline the project timeline over the next couple weeks, and will show the progress we have made so far and what is left to be completed. Currently the design has been finalized and up next is the prototyping stage, from here on, the least viable solution will be constructed and then all additional features will be accommodated in the second and third prototype.

2 Project Plan

Prototype 1 *(due October 31st)*: Based on the discussion our team had with the client at our most recent meeting, we confirmed the simplicity of the first prototype. As such, the core need is to be able to play a video through our VR application.

Task:

- Create an executable file through python or C (using a converter, ex: py2exe or Microsoft Visual Studio C Compiler) that can play 3d videos using Unity or Oculus SDK (or 1 strict video). -Everyone works on it, will take a week to complete. Will have a meeting on Saturday 26th or Sunday the 27th to come together as a group.

Prototype 2 *(due November 7th)*: For this prototype, we will seek to smooth out any problems we had in prototype one, as well as add some key components that go beyond the base idea. Can start to apply more ideas from Deliverable D.

Tasks:

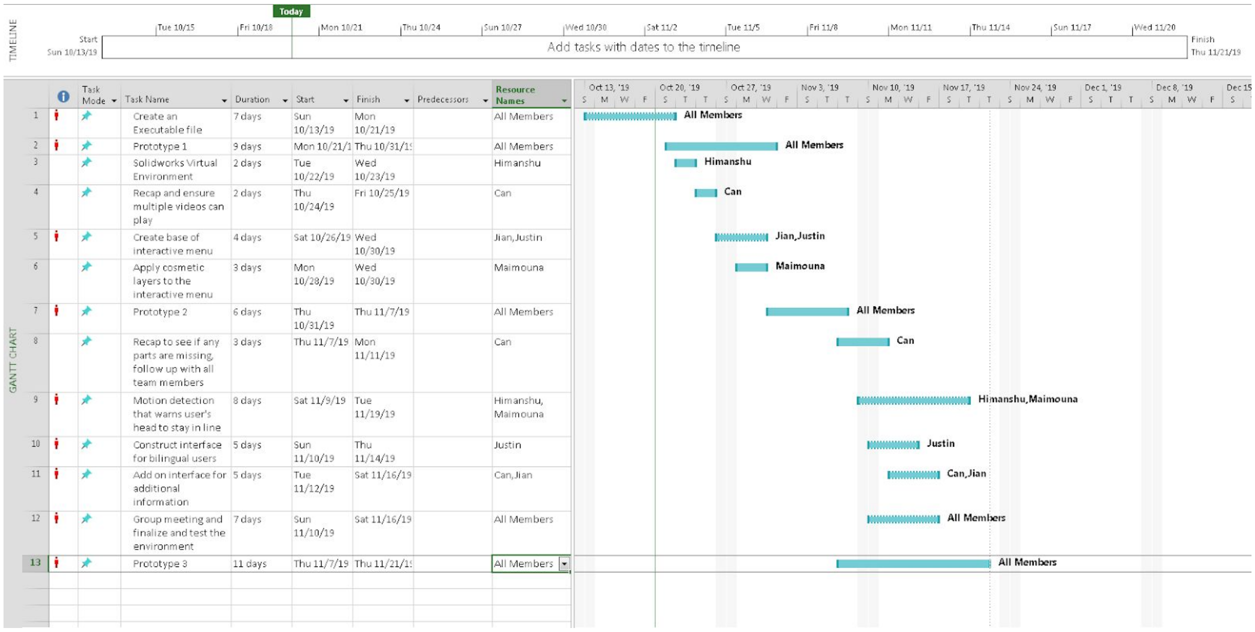
- Creating an environment in Unity or Solidworks where menu interaction takes place. *-Task for Himanshu*
- Ensure that multiple videos are playable through the executable which can be selected. *-Task for Can*
- Creating a rough use of menu interaction (ex: video organization, ask for french or english, video pause/play, etc). -*Task for Jian and Justin*
- Applying wallpaper to environment, creating options to change wallpapers. - *Task for Maimouna*

Each of these tasks should be completed in a few days during the week of the 3rd-7th of November, the group will meet up on the prior weekend of the 2nd and 3rd of November to discuss tasks and show what has been worked on.

Prototype 3 *(due November 21st)*: In our client meeting, we discussed certain functionality elements that would be good to include that help the user, and increase the quality of the experience.

- Finish any tasks not completed in time for task 2. -Completed by same people (or any helpers) before the 16th of November.
- Motion detection to warns that the user's head to stay in line with their body (they should only move head from side to side). -*Task for Maimouna and Himanshu*, task should be completed before the 16th of November.
- Have the program be bilingual for french users. -*Task for Justin*, completed before the 16th of November.
- Creating an interactive description of extra information about the equipment for users to further familiarize themselves with the experience. -*Task for Can and Jian*, completed before the 16th of November.
- Reconvene as a team to discuss the projects finishing touches and flesh out our needs. -*Task for everyone*, 16th of November.
- Finishing touches. - *Everyone*, before the 21st.

3 Gantt Chart



	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		Create an Executable file	7 days	Sun 10/13/19	Mon 10/21/19		All Members
2		Prototype 1	9 days	Mon 10/21/1	Thu 10/31/1		All Members
3		Solidworks Virtual Environment	2 days	Tue 10/22/19	Wed 10/23/19		Himanshu
4		Recap and ensure multiple videos can play	2 days	Thu 10/24/19	Fri 10/25/19		Can
5		Create base of interactive menu	4 days	Sat 10/26/19	Wed 10/30/19		Jian,Justin
6		Apply cosmetic layers to the interactive menu	3 days	Mon 10/28/19	Wed 10/30/19		Maimouna
7		Prototype 2	6 days	Thu 10/31/19	Thu 11/7/19		All Members
8		Recap to see if any parts are missing, follow up with all team members	3 days	Thu 11/7/19	Mon 11/11/19		Can
9		Motion detection that warns user's head to stay in line	8 days	Sat 11/9/19	Tue 11/19/19		Himanshu, Maimouna
10		Construct interface for bilingual users	5 days	Sun 11/10/19	Thu 11/14/19		Justin
11		Add on interface for additional information	5 days	Tue 11/12/19	Sat 11/16/19		Can,Jian
12		Group meeting and finalize and test the environment	7 days	Sun 11/10/19	Sat 11/16/19		All Members
13		Prototype 3	11 days	Thu 11/7/19	Thu 11/21/1		All Members

Note: The Microsoft Project (.mpp) has also been submitted alongside the deliverable.

4 Project Risks

1. The project code has logical problems, thus the interface does not function properly as we expected.

Using a debug tool to go through each line of the whole project code until the bug has been detected, and then try to fix it by ourselves or seek advice from a professional person. If the bug cannot be fixed, we will redesign that part of the code and replace the origin part with this one.

2. The effect of the interface's appearance of does not reach our goal at the end.

Replace the appearance with a monochromatic appearance.

3. There are some technical issues when we try to insert extra equipment information into the video.

We will set up a special section outside of the video to contain that equipment information. Users can watch this section before or after they have watched the videos.

4. The VR device does not support sound collection or the sound quality collected is terrible, therefore, remote communication is not possible on the VR device.

We can use Bluetooth earbuds or cellphones to implement the remote communicate function.

5. We cannot use a hamster ball as an interactive environment due to the cost or materials.

We may use four long and thin plastic pipes that can firmly stand on the ground, and then use plastic wrap to cover those plastic pipes, to form a cubic space as the interactive environment. When the users' hands touch the plastic wrap, they will know that is the end of the space. Also, the plastic wrap is elastic, the user will be well protected even though they fall.

6. When we cannot create a VR room in unity.

We can download some existing room mods from the unity store.

7. The consumer is not able to upload new wallpaper into the interface.

We will provide some nice wallpapers for the consumer to choose when they cannot use their wallpapers.

8. The user cannot control the volume of the video.

We will provide multiple videos with different volumes. In the beginning, users can listen to ten five-sec videos with different volumes of sound, and then users can choose the volume they are most comfortable with and the rest of the videos will have the same volume.

9. The users may not be able to pause, play, fast forward and rewind the video.

Each video will be divided into small pieces of videos, users can exit the origin long video when they want to pause, play, fast forward and rewind the video, and then they can use small pieces of videos to do those actions. After that, they can jump back to the long video.

5 Bill Of Materials

Identification Number	**Part Name**	**Description**	**Plugin Cost**
1	SRDebugger - Console & Tool On-Device	Unity Plugin	$29.99
2	Calm Background music	Unity Plugin	$4.99
3	Colors	Unity Plugin	$20.00
4	unIntelliSense (Unity API Assistant)	Unity Plugin	$12.95
5	Language changer	Unity Plugin	$10.00
6	Unity Program	Software	Free
7	VR Equipment	Hardware Component	Free (Provided by University of Ottawa)
	SUBTOTAL		$77.93
	TAX (13%)		$10.13
	TOTAL		**$88.06**

6 Conclusion

Overall the team is on schedule, and the final functioning project is on schedule to be completed by design day, considering all the design suggestions given by the client, a final design has been chosen, and the deliverable above states the overall monetary breakdown, in terms of how much all the plug-ins in Unity will cost, and what software/hardware equipment is required to complete the project. In section 5 of this deliverable, the bill of materials conclude that the total cost of the project will be ***$88.06*** (applicable tax inclusive), which is well under the monetary criteria of $100.