

Project Deliverable E: Group 8

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Abstract

Mines Action Canada wants a story-driven video in a VR environment that will convince politicians to ban autonomous weapons, by showing how non-combatants will be affected by these weapons. Group 8 has come up with a finalized idea and created an initial prototype: a diagram depicting the VR environment and a storyboard showing how the scene will be played out. Group 8 has also listed goals and plans for future project deliverables.

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Introduction

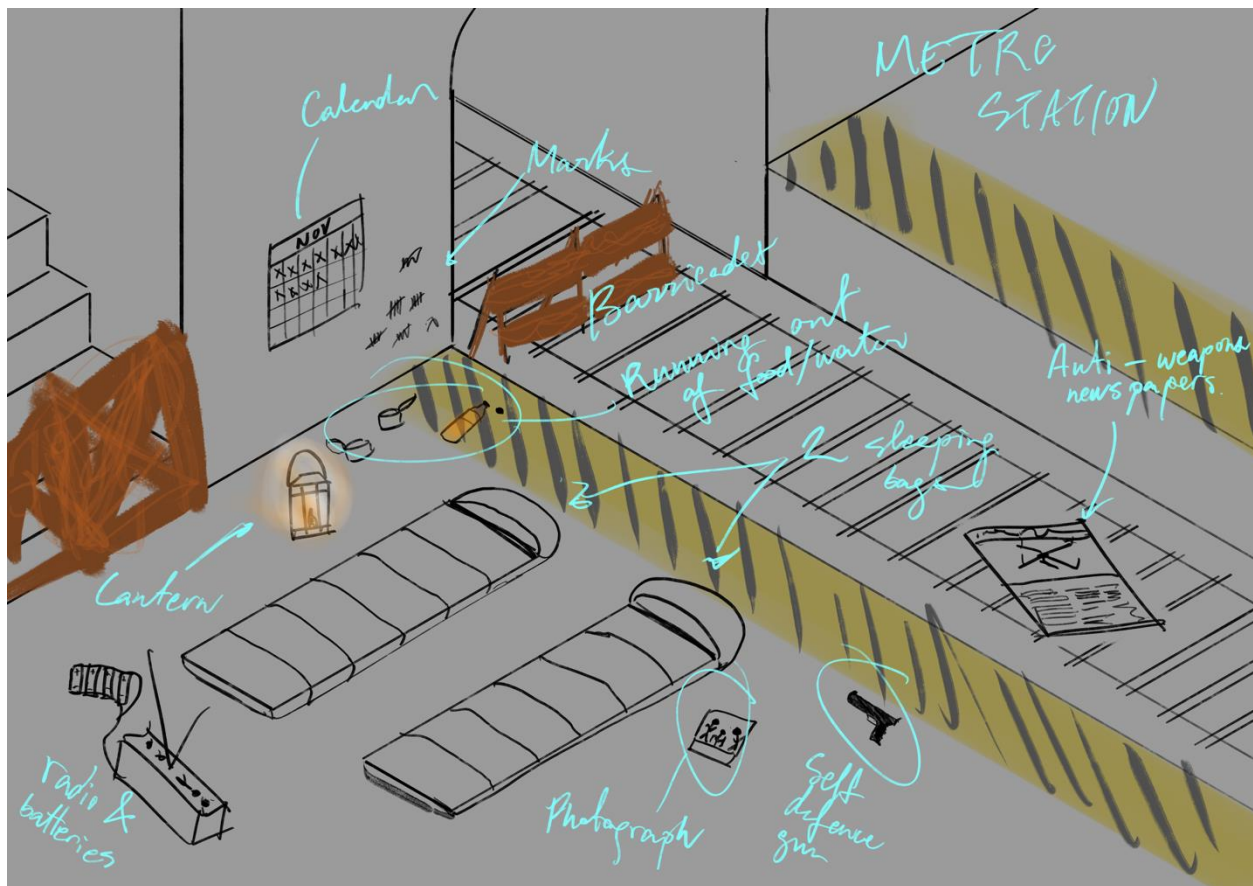
Mines Action Canada wants a story-driven video in a VR environment that will convince politicians to ban autonomous weapons, by showing how non-combatants will be affected by these weapons. As a process of our design thinking, we previously decided on a finalized idea for our prototypes. In general, those ideas were to build the environment in a train station, and have our main character go through a story line that goes through an emotional driven story. Here, our first initial prototypes – a storyboard and diagram – were accomplished. We will discuss the details of our prototype, our future planning, and bill of materials.

Prototype – Storyboard and Diagram

We have finalized our idea into the following prototypes: a diagram and storyboard.

Figure 1

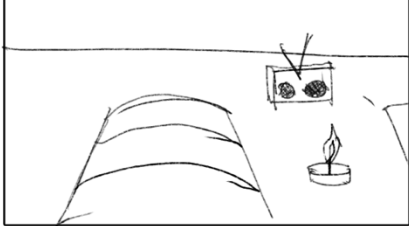
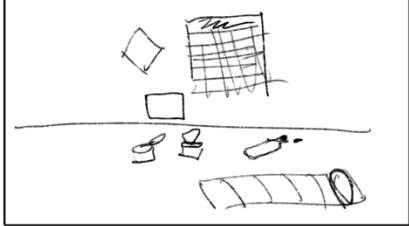
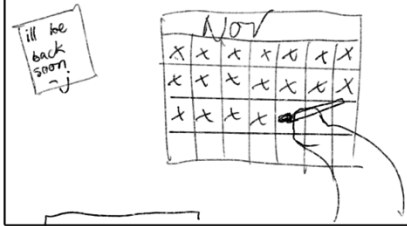
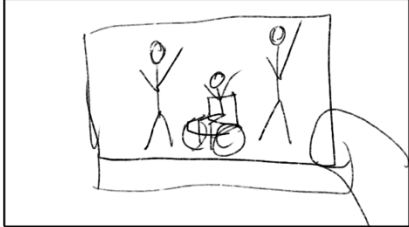
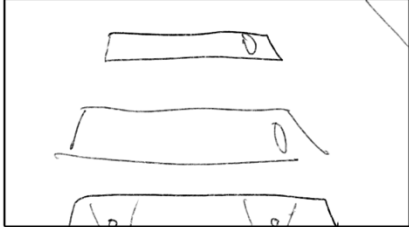
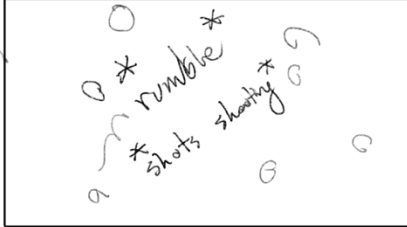



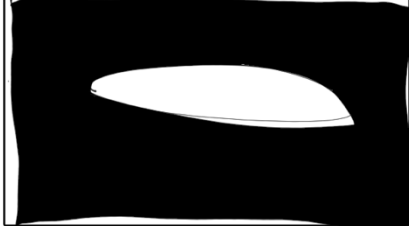


Diagram of VR Environment



This VR environment depicts a metro station in which our main character will be settled. It has 2 sleeping bags, one for the main character and one for their friend; a self-defence weapon; a photograph with the main character, their friend, and their friend with disabilities that could not survive the attack of the autonomous k-bots; a radio playing information on k-bots, how to deal with them, how they detect their victims; a calendar showing how long the friend has been gone for; anti k-bots newspapers; low supply of food and water.

Figure 2

Storyboard of the Scene

<p>Scene:</p>	<p>Scene:</p>	<p>Scene:</p>
		
<p>wakes up, sound of radio</p>	<p>Notice empty sleeping bag walks to empty food</p>	<p>Walks to calendar, marks new day</p>
<p>Scene:</p>	<p>Scene:</p>	<p>Scene:</p>
		
<p>shows photo of friends</p>	<p>Comes, 2 beds only</p>	<p>rumble, particles fall, hears shots</p>
<p><small>Create your own at Storyboard That</small></p>		
<p>Scene:</p>	<p>Scene:</p>	<p>Scene:</p>
		
<p>person from tunnel comes warning me.</p>	<p>hears drone, sees flashlight</p>	<p>hiding</p>
<p>Scene:</p>	<p>Scene:</p>	<p>Scene:</p>
		
<p>drone recognizes mc as soldier, shoots</p>	<p>end</p>	
<p><small>Create your own at Storyboard That</small></p>		

The following is a description of each scene of the story board:

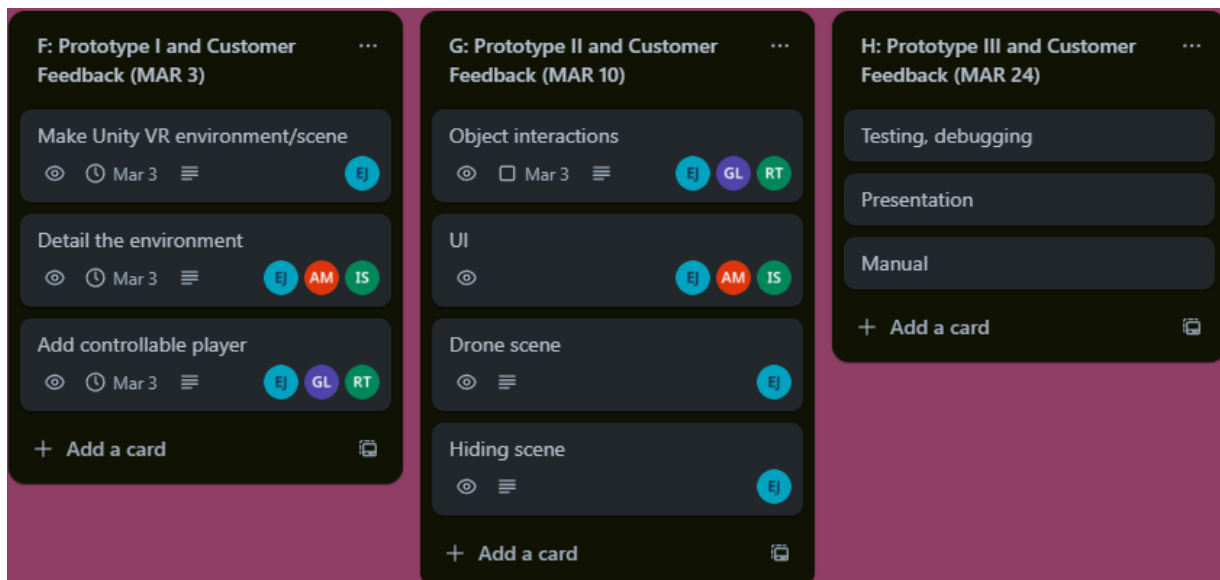
1. Main character (MC) wakes up. In the background, the radio is playing, telling how to avoid k-bots, how they operate, etc.
2. MC gets out of bed, walks over to the calendar on the wall.
3. MC marks a new day that their friend is gone. A note on the side shows a message from “J”, his friend, saying he is out to get supplies. The number of days gone messages to the player that he has probably fallen to the hands of the k-bots.
4. MC picks up a photograph from the wall of him/her, J, and another friend. This friend is shown to be in a wheelchair.
5. MC lowers the photograph and sees that where he/she and J were, there are sleeping bags. However, where the friend with disabilities was, there is no bed. This messages to the player that friend has probably passed away, and that people with disabilities are vulnerable to the world with k-bots.
6. Sudden vibrations/earthquake, particles fall from the ceiling.
7. From the metro tunnel, we hear footsteps and a man running out. He is warning that a k-bot has found the hideout and is coming.
8. As the man as left, we hear a drone coming as well as a light approaching.
9. Before the drone comes out of the tunnel, the main character hides in the sleeping bag to avoid being seen.
10. MC hears outside that the drone is detecting thermal traces as well as the self-defence gun that is beside his sleeping bag. The drone assumes that MC is a soldier and fires.
11. END

Future Planning for Next Prototype

The following is a list of goals to accomplish for the project, and details are written for our next project deliverable, on March 3.

Figure 3

Project plan – Trello



- a) Make Unity VR environment.
 - a. Add all the basic elements of the environment (radio, sleeping bags, but just the visual elements).
 - b. Make the foundation. No audio yet.
- b) Detail the environment.
 - a. Colors, lighting, ambiance.
- c) Add controllable player.
 - a. Make gravity work, collision detection, no clipping through objects.

Materials Needed

The following is a list of assets and software needed to build our future prototypes.

- Unity: For scene building and animations
- Mixamo: For character skins and animation packs
- Unity Asset Store: Many assets from here will be purchased to build our scene. Table 1 is an initial bill of materials for our next prototype:

Table 1

Bill of Materials for initial prototype

Asset	Link	Price
Metro station	https://assetstore.unity.com/packages/3d/environments/low-poly-apocalypse-metro-station-123203	8.99
Poly survival collection	https://assetstore.unity.com/packages/3d/props/poly-lite-survival-collection-220452	Free
Survival kit	https://assetstore.unity.com/packages/3d/props/tools/survival-kit-lite-92549	Free
Survival characters + weapons	https://assetstore.unity.com/packages/3d/characters/survival-stylized-characters-5-weapons-115559	Free
Low poly fence	https://assetstore.unity.com/packages/3d/props/exterior/low-poly-fence-pack-61661	Free
Poly guns	https://assetstore.unity.com/packages/3d/props/guns/guns-pack-low-poly-guns-collection-192553	Free
Poly characters	https://assetstore.unity.com/packages/3d/characters/humanoids/fantasy/free-low-poly-human-rpg-character-219979	Free
Poly terrorist	https://assetstore.unity.com/packages/3d/characters/humanoids/humans/low-poly-terrorist-228607	Free
Basic movements	https://assetstore.unity.com/packages/3d/animations/basic-motions-free-154271	Free
Total:		8.99

Conclusion

To summarize our work, we finalized our initial prototype, which was a diagram of our VR environment and a storyboard of our scene concept. Then, we discussed plans for our next project deliverable and our workflow until design day. Finally, we worked on a bill of materials needed for our next prototype, deadline is on March 3.