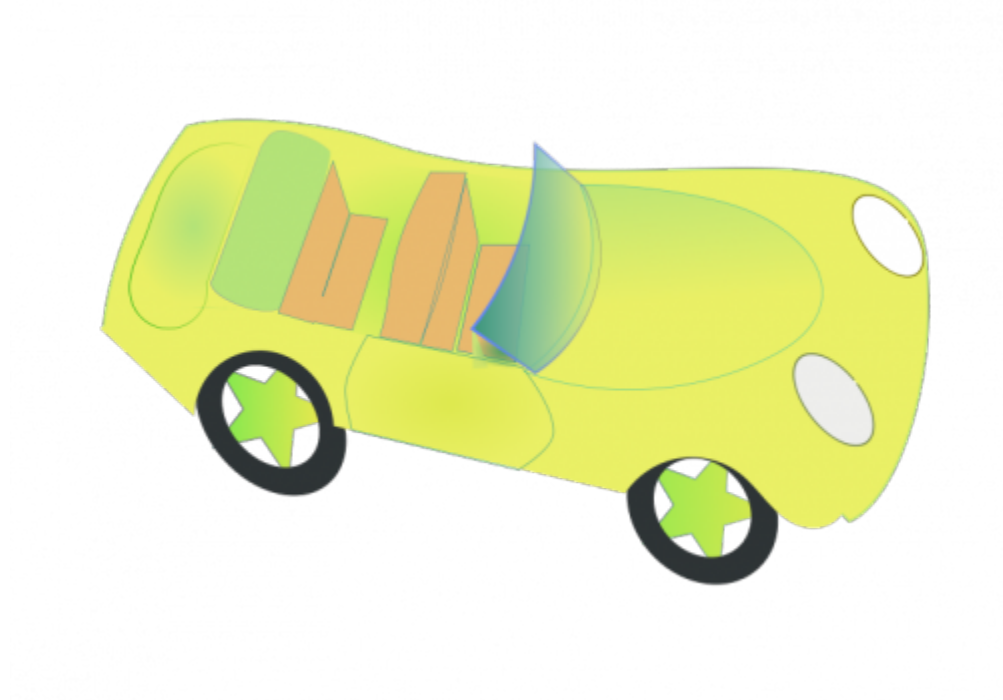


COMP4990 - Project Management: Techniques and Tools

Design Document for:

The Western Trail



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Game Overview

The player is thrown into a post-apocalyptic scenario taking place in Canada, where they must survive the world, manage resources, allies, and decisions, and make it to the safe zone. This captures elements of existing games, such as *Organ Trail* by developer studio *The Men Who Wear Many Hats* and *Death Road to Canada* by developers *Madgarden* and *RocketCat Games*, and puts them together in a 3D environment.

FAQ

- What is this game?
 - A choose your own adventure taking place in a post-apocalyptic world. You (and possibly 3 other allies) must manage resources and survive to the safe zone.
- What will I control?
 - You control a designated leader character. Be careful - if the leader dies, they're gone.
- The main focus?
 - Manage resources, decisions, and survive. The game has been designed with replayability in mind - no experience will be the exact same as the previous.
- Different from others?
 - Unlike some existing games, they take place in a 2.5D environment. This game takes place in a 3D environment. In addition, it captures missing elements in each game by putting them together into one.

Game Features

Gameplay and Mechanics

- Up to 4 save files for 4 different games. Saving is done after every major action, such as decision making and traveling.
- Lead a party of up to 4 people including yourself. The other 3 companions will help fight and collect resources depending on set tactics. Or if you feel like being a loner, you can start off alone.
- Manage resources through 3 different iterative phases of the game - traveling, resting, and combat.
- Randomly generated characters, decisions, and maps (while still fitting the environment setting). You will have to live with the decisions you've made - no take backs!
- Custom character creator allows up to 45 custom characters with perks, traits, features, and appearances set by you.
- Replayable - change the difficulty and the characters you travel with.

Game World and Genre

Overview

The game will take place in a post-apocalyptic Canada. The game is in the following genres:

- Strategy - manage your resources and decisions - can you make it to the end?
- Simulation - this is a what-if scenario.
- Rouge-like - travel through the procedural maps.
- Survival - your goal is to survive to the end.

Samples of the game world will be discussed in more detail in the maps section.

Camera

The player's camera will be fixed during the travel and rest phases. During the combat phase, the player will be fixed in a 1st person camera.

Game Engine

Unity3D will be used to handle physics and rendering terrain/landscapes on the environment.

Maps

Overview

Depending on the distance traveled by the player, the environment of the maps will change. The maps will be procedurally generated - from the environment background when traveling and resting to the combat environment.

Quebec and Northeastern Ontario (1)	Northwestern Ontario (2A)
The starting location is filled with forests and rolling plains. Home to the starting city, Montreal and Ottawa. It splits off into Northern and Southern Ontario - the player must decide which route they will take. You cannot take both paths.	A wooded marshland and rugged landscape, difficult to traverse but less of a detour. Home to major landmarks such as Timmins and Thunder Bay. Taking this route will lead to Manitoba and Saskatchewan.

<p>Southern Ontario (2B)</p> <p>Rolling plains and shorelines from the Great Lakes. This is part of the detour to Manitoba and Saskatchewan. Home to major landmarks to stop at such as Toronto, Windsor, and London, and Niagara Falls. Taking this route will lead to Michigan across the border.</p>	<p>Michigan, Illinois, Wisconsin, Minnesota (2B)</p> <p>Accessible from the Southern Ontario route, this is filled with shorelines, lakes and forests. This is part of the detour to Manitoba and Saskatchewan. Home to major landmarks such as Detroit, Chicago, Milwaukee, and Minneapolis. Taking this route will lead to Manitoba and Saskatchewan.</p>
<p>Manitoba and Saskatchewan (3)</p> <p>Accessible from Northwestern Ontario or the Southern Ontario-U.S. detour, Manitoba is filled with tundra and boreal forests while Saskatchewan has more rolling plains and prairies. Home to major landmarks such as Winnipeg and a split route between Regina or Saskatoon.</p>	<p>Alberta (4)</p> <p>At the foothills of the Rockies, the landscape is rugged and becomes uneven. In the post-apocalyptic environment, rockslides are not uncommon. Home to major landmarks such as Edmonton, Hinton, Calgary, and Banff. However, the former two are locked to a path while the latter two are locked to a different path.</p>
<p>British Columbia (5)</p> <p>The Rockies and the Coast Mountains together bring challenging terrain to cross, especially with the frequent rockslides and avalanches. Home to major landmarks such as Kamloops, Kelowna, and Vancouver, the target destination. You can only visit one of Kamloops or Kelowna. At the last stretch is a bridge leading into Vancouver.</p>	

Weapons

Overview

Borrowing from *Organ Trail*'s weapon system, three ranged weapons will be available - a pistol, a shotgun, and a rifle. Borrowing from *Death Road to Canada*'s weapon system, three physical weapons will be available - a shovel, a bat, and a knife.

Pistol <ul style="list-style-type: none"> • Medium range • Medium damage • Quick reload 	Knife <ul style="list-style-type: none"> • Very short range • Very light • Quick reposition time
Rifle <ul style="list-style-type: none"> • Long range • Medium damage • Medium reload 	Bat <ul style="list-style-type: none"> • Short range • Light • Decent reposition time
Shotgun <ul style="list-style-type: none"> • Short range • High damage • Slow reload • Spread shot that costs 3 ammo 	Shovel <ul style="list-style-type: none"> • Short range • Heavy • Long reposition time

Resources

Overview

In this game, there are # key resources to manage: food, fuel, ammo, scrap, and medkits. Food is slowly depleted over time by your team to stay alive. Morale and health will drop if there is no food available. Fuel is required for your car to move. Ammo is required to use ranged weapons. Scrap is used to fix the car deteriorating over time. Medkits are used to heal teammates, though these are rare to find when scavenging.

User Interface

Overview

Like most games, the game will have an interface that the user can interact with as a graphical user interface (GUI). Including the typical main menu where users can decide to play, quit, or change some preferences, we plan to allow the user to have a helpful interface during gameplay.

- List the ammo (if applicable) of a weapon remaining
- List the equipped weapon and any items the player may have
- List the user's status (health)
- Change the overall tint of the screen depending on status effects (none = healthy, green = poisoned, red = near death, etc.)
- Depending on the phase (travel or combat), different options will be available.

Travel Phase

Overview

To travel, the player will be in a standard car that can go various speeds to posted landmarks. With perks that can be found on the road, travel can be done more efficiently and/or safely. Not all upgrades can be applied at the same time, so pick wisely:

Efficiency/Resources <ul style="list-style-type: none">• Better fuel mileage• Secure containers• Travel garden• Better engine	Safer <ul style="list-style-type: none">• Shielded doors• Secure windshield• Unpoppable tires• Electric engine
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After every driving iteration, the game is saved and there is a chance a random event will occur for the player to decide. Depending on the decision made, resources, morale, and the overall team can change in addition to saving immediately after. Players can choose to stop the car in between landmarks if needed.

Resting Phase

Overview

Resting takes place either on the road or in a landmark. During all rests, you can choose to rest up, fix the car, go scavenge, or look for a trader. When in a landmark, you can stop by a mechanic for vehicular resources, a market for general resources, and a mission board of requests that can net you resources. Resting at a landmark will heal more than resting on the road.

The farther you go in-game and the longer you stay on a map, the less resources that appear when scavenging, so be sure to be prepared.

Combat Phase

Overview

Using the weapons mentioned above, players and their allies can combat the enemies of the environment. This will be done in an FPS style. While gunshots don't vary in damage, physical weapons do. When using a very light weapon, it counts as 0.5 of a hit. A light weapon counts as 1 hit while a heavy weapon counts as 2 hits.

Enemies

The environment in-game is plagued with mutants that will try to kill the player at all costs. These enemies come in various classes:

- Standard - 1 shot or 2 physical hit will kill
- Bloated - 2 shots or 3 physical hits will kill
- Poisoned - 1 shot or 2 physical hits will kill, can poison the player temporarily

Depending on the difficulty chosen, the damage dealt to players will differ.

Mission Types

Some combat will require you to survive for a certain amount of time before you are able to leave while others you can leave when you decide to. However, the longer you stay on a map, the mutants can get more aggressive.

Types of missions include scavenging missions, rescue missions, siege/survival missions, and sprint missions. Scavenging allows you to look for supplies that randomly appear, rescue missions are part of requests to look for an NPC on a map, siege/survival requires you to survive for some time before being able to leave, and sprint missions require you to get to a point on the map.

Audio

Overview

To add to the feel of the game, audio will be added to match the environment and the player's situation, such as:

- Different background audio depending on the location and menu
- Different audio during different phases (traveling and resting vs. combat)
- Different combat audio to vary