

Building the Railroad

Design Document



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Document Overview

The following is the Game Design Document for *Build The Railroad*, a game created as an interactive experience for the Union Pacific Railroad Museum (UPRR Museum). The game is intended to be used only in the museum and has specific design specifications to coincide with the hardware and layout of the exhibit. This game is developed by Adventure Club Games located in East Lansing, Michigan.

Document Notes

Directions

Any reference to the side of the game (left and right) is meant to be from the player's perspective ("house left" and "house right" in theatre terms).

Avatars

The term "Avatar" in the document refers to the characters representing the users within the game world.

Workers Left and Right

The term "Worker Left" and "Worker Right" refer to the user on the left and the user on the right respectively. These terms are used by the Narrator, the document will refer to the users as players.

Non-Player Character (NPC)

The term NPC (Non-Player Character) refers to all in-game characters that are controlled by the game and not controlled by the player.

Abridged/Complete Version

Due to time constraints for this project it will be completed in two phases. The first phase will be completed on April 18th, 2012, titled the "Abridged" version of the game. The second phase will be completed on June 30th, 2012, titled the "Complete" version of the game.

The Abridged version will contain the following parts:

- Choosing Avatars
- Placing tie
- Laying down rail
- Driving in the spike
- Pose for the photographer

The Complete version will contain the abridged version with these additions:

- Choosing accessories/clothing
- Choosing additional workers to help place the rail
- Random Events
 - Heat
 - Wind
 - Rattlesnake

Related Documents

Script

A separate document that will act as the single source for all dialog. Any dialog in the Game Design Document will be abbreviated intent and the file name for the audio clip. This way, only one script will be managed and inconsistencies will not occur over several documents.

[Link](#)

Kinect Interactions

A separate document that shows the actions the player will take to interact with the Kinect. Shows example photos of the motions with detailed descriptions.

[Link](#)

Flow Charts

Several documents detailing the sections of the game in flowchart form.

[Overarching Flow](#)

[Avatar Selection Flow](#)

[Clothing Selection Flow](#)

[Tie/Rail Placement Flow](#)

[Hammering Spike Flow](#)

Audio List

An audio list of all the sound effects in the game and detailed information including description, current status, and base sounds and sound effects.

[Link](#)

Game Overview

Build the Railroad is an interactive exhibit developed for Union Pacific Railroad Museum (UPRR Museum). Utilizing the Kinect, the game allows the player to experience what it was like to build the Transcontinental Railroad across Nebraska from 1863 to 1869 through motion based interactions made available by the Kinect technology. This experience includes clothing of the time period, work such as laying ties and rails, and hardships the workers faced in the environment. The goal of this game is for the player to walk away from the exhibit with a realization of how difficult it was to construct the Transcontinental Railroad

Game Specs

Target Audience

- Museum goers of all ages

Play Experience

- Play time ~10 minutes
- 1-2 Players

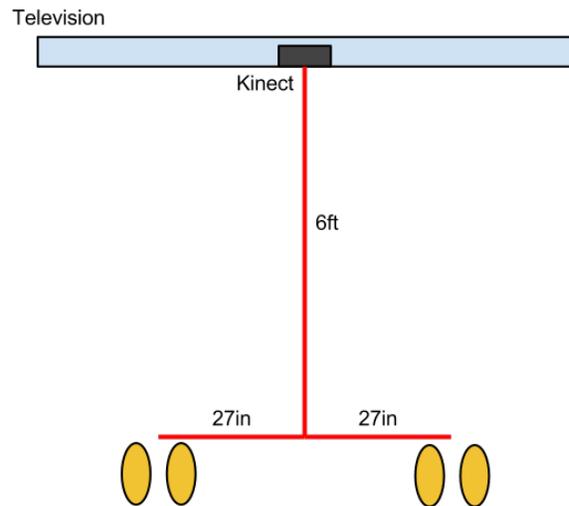
Hardware

- 1 Computer (Windows 7 64-bit)
- 103 inch Plasma - 1080p resolution
- Microsoft Kinect
- High Resolution Webcam

Kinect Setup

The Kinect should be setup in the following manner:

- The Kinect should be 27 inches off of the ground
- Each Player should stand 6 feet away from the kinect and 27 inches off from the center of the kinect



Characters

Casement

John Stephen "Jack" Casement (January 1, 1829 – December 13, 1909) was a general and brigade commander in the Union Army during the American Civil War and a noted railroad contractor. He directed the constructional phase of the Transcontinental Railroad, which linked the Western United States with the East. (Taken From the following Wikipedia article http://en.wikipedia.org/wiki/John_S._Casement)

Casement's role in the game will be to guide the player with what work they will be doing within the game. Casement's dialogue will be diegetic. It will occur with the action of the game and will be part of the game world. The only time Casement will talk towards the camera is if the game is in 1st person perspective or if the avatar is supposed to be behind the camera.

Stats-

Sex: Male

Age: 37

Height: 5' 2"

Weight: 128-143 lbs

Etc: Likes leather and fur "a lot", carried a buggy whip

Narrator

The Narrator's role in the game is to guide the player with instructions and information that would not make sense for characters within the game world to state. Ex: "Please lean over to register picking up the rail. Rails likes this would weigh up to 600 lbs"

The narrator's dialogue will be non-diegetic. It will occur outside of the action of the game and will not be part of the game world. The Narrator will also be voiced by a female, this way it is clear when the player is being spoken to by Casement versus the Narrator.

Player Characters/NPCs

When the user first starts playing they will be able to choose from 8 different characters to be their avatar within the game. This same selection will also be given when the player(s) need to choose NPCs to help lift the rail. During the avatar selection the characters will only be dressed in their basic outfit. During the NPC help selection the characters will be given random clothes from the clothes and accessories selection so they appear that they have already been working. Various variations on these NPCs will also be scattered throughout the environment to make the setting feel that a lot of work is being done.

Base Characters:

3 male -

- 1 Caucasian
- 1 African American
- 1 Asian

1 female -

- 1 Caucasian

Environment

The game takes place on the plains of Nebraska during the summer of 1866.

Gameflow

Game Progression

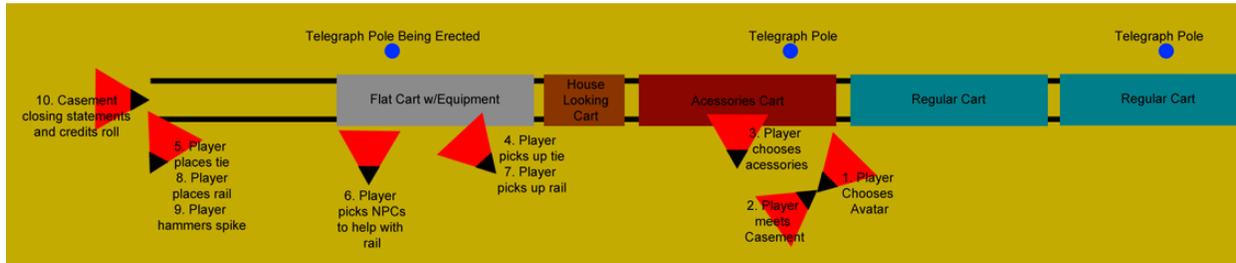
The entirety of the game takes place in one level/scene and all transitions from part to part in the game will be continuous. Though each section has a fixed camera perspective, the camera will be animated from fixed camera position to fixed camera position. This results in smooth transitions as the player progresses through the game. (Sub sections such as the random events and posing for the photographer are not included for they take place within other

overarching sections. however

Because of the smooth transitions, the game will not have any sudden or abrupt jumps between sections. This also means that there will not be any loading screens unless the player restarts.

Level Layout

Overhead Level Layout



Sections Sequence

The player's goal is to work through an abbreviated work day laying down track. This includes everything from choosing work cloths to driving in railroad spikes. The game progresses linearly as follows. For more detailed information, see each topic's full section later on in the document.

Opening

The player is introduced to the Narrator and a little context before the game begins.

Choosing an Avatar

The player(s) choose their avatars from a pool of characters to represent them through the rest of the game.

Casement Introduction

The player(s) are then introduced to Casement and a little context as to who he is.

Choosing Accessories

The player(s) choose what clothing their avatars will be using as well as any additional accessories their avatars will use throughout the day. These accessories will affect the random events that occur throughout the rest of the game.

Placing the Ties

The player(s) must act as though they are picking up virtual ties, balance the tie as their avatars move it into position, and lower them down. This is done through approximated motion with the Kinect.

During this time, the player(s) will be asked to pose for a photographer (see *Pose for a Photographer*)

Choosing the Number of Workers on Rail Crew

Simple interactive question in which the player(s) are asked how many workers they think it took to lay down rail. The player then chooses the number that they think is correct.

Laying Down the Rail

Similarly to *Placing the Ties*, the player(s) must lay down rail. This involves picking up the rail, balancing it as their avatars move into position, and slowly lowering the rail down.

During this time, a random event will occur that causes the player to either work differently to carry the rail or do a separate action. These random scenarios include:

- Extreme Heat
- Heavy Winds
- A Lack of Gloves
- Finding a Rattlesnake

Driving in the Spikes

The player(s) must pound a railroad spike into the ground. This is accomplished by making a hammering motion that a railroad worker would make in an alternating rhythm with their partner player/NPC.

Game Setting

The game takes place during the Union Pacific's construction of the transcontinental railroad across the plains of Nebraska in July, 1965 at 3 pm. The player will see from the perspective of a worker at the current end rails that have been laid. The end of the track will be visible with grating continuing on where track is intended to be laid. The first cart on the track after the end of the rails will be a flat cart that contains ties, rails, barrels of spikes and other various equipment. Behind the flat cart will be a smaller cart that visually looks like a small shed. Behind the shed cart will be a regular train cart that will contain the clothing and accessory options for the characters. Behind the accessories cart will be 40 other similar looking carts. On the north side of the track will be telegraph poles and the closest to the flat cart will slowly be being erected throughout the game. Scattered throughout the area and on top of carts will be various NPCs performing tasks. The only animal that can be seen will be a horse attached to the flat cart that stays in the same spot for the duration of the game.

Our goal is to model our setting after this photo:



Gameplay

Controls

Motion based. The players control their characters by doing the literal motions. However, the movement of the characters are not on a 1-1 ratio with the player since the player isn't actually holding the tie. Instead, the character's position is a close calculation based off of the player's movement.

Level Meter

During the carrying of the tie and rail portions of the game the players are required to keep the objects that they are carrying level. This will be achieved by a meter located near the avatar's hands and the object they are carrying. It will have both high and low threshold markers and a current position indicator. The player must keep between the threshold in order for the avatar to successfully hold the object. If the current position indicator ever leaves these thresholds the object will be dropped. If the random events require the player to be more precise with their movements this will result in the threshold becoming smaller for the designated period of time that the random event dictates.

Kinect Instructional Pop-ups

When ever the game requires input from the player a small animation will appear on the side of the screen showing the movement the player(s) are required recreate to complete the task. The animation will be a simple mannequin that will mimic the correct movements.

Start Over Button

A physical push button will be located within the exhibit that will allow for the game to be restarted. No matter what state the game is in, when the button is pressed the game will be reverted to its screen saver mode and will await for new players to register. The button will be a simple USB input with a microswitch.

Lack Of Input Monitor

If at anytime the game is left in any state and the Kinect monitors that there is no players in the exhibit for 1 minute, the game will reset and go into the screen saver mode.

Opening

Player(s) enter the room and are instructed where to stand. The narrator then explains what is going on to the player(s) and what they need to do.

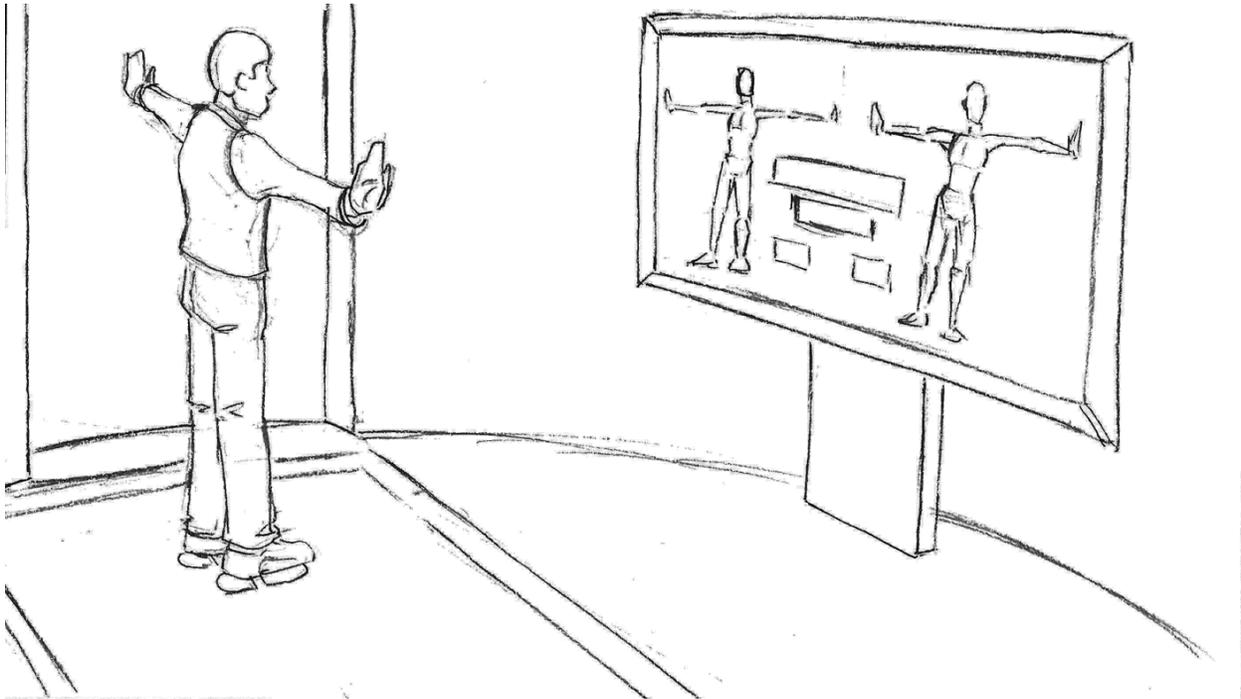
Flow

- I. Player(s) enter the room to audio of people working on the railroad. In front of them are two sets of footprints painted on the ground to show them where to stand. On the screen is an indicator telling the players to stand on the footprints.
 - a. On Screen Prompt: "Please stand on the footprints and form a (image of a body forming a "t" shape) with your body to start playing."
- II. Narrator: Narrator greets the player and directs them where to stand.
 - a. Script Reference: Opening-Narrator-1
- III. Confirming Players: The player(s) must stand on the footprints and enter a "T" stance. Once a player is enters the stance, they are registered as a player to the Kinect. When all players present are ready, the first worker hovers over the "Done" button.
- IV. Narrator: Transitions the player into the Avatar Selection
 - a. Script Reference: Opening-Narrator-2

Scene

The camera faces an empty box car sitting on the track. Workers can be seen beyond the car. A few workers in the background are beginning to construct a telegraph pole.

Mock-up



Controls

“t” Pose

Player(s) form a “t” shape with their body in order for the Kinect to register them as the current players. A 3 second counter appears on screen to confirm that the player(s) must hold their “t” pose to be confirmed.

Done Button

In instances where the player can make multiple choices or no choices at all they will be able to select a “Done” button to move onto the next phase. The player simply hovers over the button and a countdown of 3 seconds will occur, and if the player holds his cursor on the button for the 3 seconds it will be registered as button press.

Used In:

- Player registration
- Avatar Selection
- Clothing Selection
- Extra Worker Selection

Choosing an Avatar

The player chooses an avatar to represent them for the rest of the game. Selection takes place in front of a old wooden boxcar in the work area. Sounds of the workers can be heard in the background.

Perspective: First Person

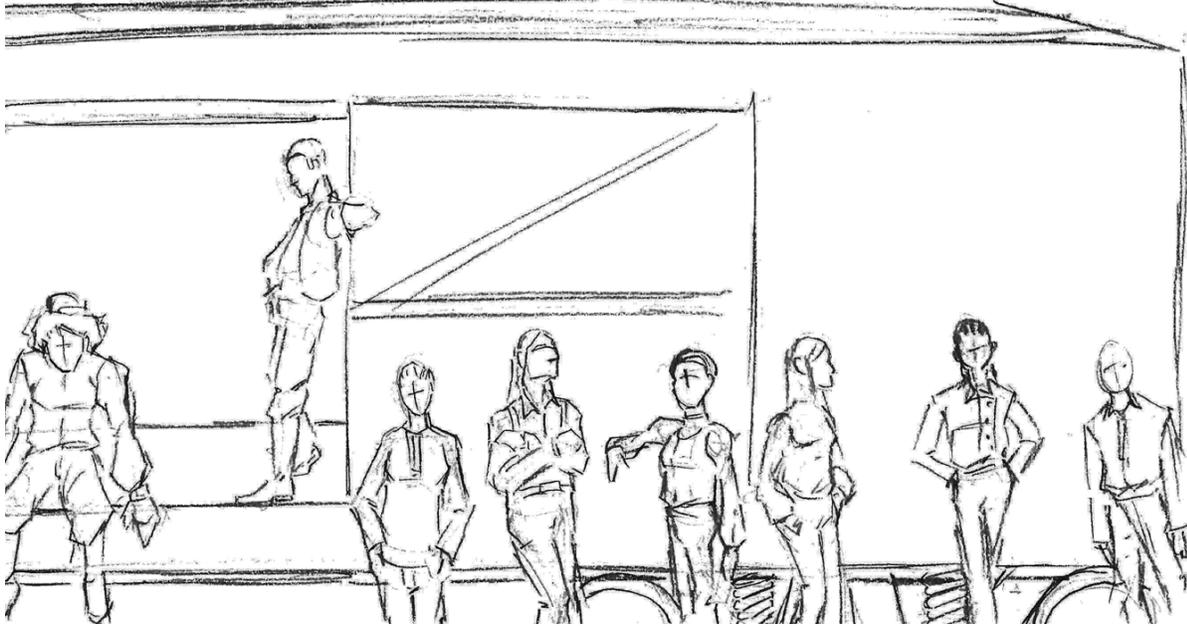
Flow

- I. The Avatars walk on stage, four from each side of the screen. They stand in front of the box car facing the player(s). The workers are evenly spread out and waiting for player input. The player(s) only have simple clothes on: shirts, pants, and boots. More Clothes will be added after.
- II. Narrator: Explains how to select and how to proceed to the player
 - a. Script Reference: ChoosingAnAvatar-Narrator-1
 - b. A help box explaining the motions appears on the side.
- III. The player(s) chooses their avatars by pointing with their right arm and gesturing towards themselves with their left. When a player is pointing at the avatar, the avatar waves at the player so they which is being highlighted in addition to a highlight.
 - a. If there are two players, the player on the left will go first and then the player on the right will go second
 - b. Once an avatar is chosen, the avatar will step forward and offscreen. If there are two players, the second player cannot choose the same avatar as the first. Once all players have an avatar, the game proceeds
- IV. The non-selected avatars run off camera to the closest side.
- V. Casement: Interrupts to get the avatar's attention and transition into the next scene.
 - a. Script Reference: ChoosingAnAvatar-Casement-1

Scene

Eight workers stand in front of a single box car on the track. Workers can be seen in the background. The scene takes place on the plains of Nebraska with slight rolling terrain as far as the eye can see.

Mock-up



Controls

Selection Controls: The player points at their selection with their right hand and gesture towards themselves with their left

Casement Introduction

Casement introduces himself to the player(s).

Perspective: First Person

Flow

- I. Transition: The camera turns 180 degrees to look away from the train car. Standing their is Casement.
- II. Casement (If there is a female worker): comments on how strange it is that there is a female worker to build the railroad.
 - a. Only if a player has chosen a female worker
 - b. Script Reference: CasementIntroduction-Casement-0
- III. Casement: Casement explains who he is with a little background before telling the avatar to get back to work to transition into the next scene
 - a. Script Reference: CasementIntroduction-Casement-1

- II. Transition: The train car's door slides open revealing worker shelves with clothing and accessories on wooden shelves and pegs. In the center of the box car is a mirror where the worker can see their avatar and the clothing they are wearing. To the left of the mirror are coats on wooden pegs and hats on wooden shelves above the coats. To the right of the mirror are gloves and neckerchiefs on wooden shelves.
- III. Narrator: Explains what the player is doing and reminds them on how to select their choices.
 - a. Script Reference: ChoosingClothingAccessories-Narrator-1
- IV. The player(s) then choose their clothing/accessories by pointing at it with their right arm and gesturing towards themselves with their left. Where the player is pointing is represented by a cursor. Once an item is selected, it is removed from the shelves and appears on the player as viewable in the mirror. A player picks all the clothing/accessories that they want and then hover the cursor over the "Done Button".
 - a. The currently highlighted clothing grows slightly larger, as if being zoomed in. It then rotates as long as it is highlighted.
 - b. After the left player selects their clothing, the right player takes their turn. They are unable to select the same clothing/accessories.
- V. Casement: Transitions into the next scene
 - a. Script Reference: ChoosingClothingAccessories-Casement-1

Scene

The workers have moved off screen and the boxcar has opened up to reveal supplies. In the center of the box car is a mirror where the worker can see their avatar and the clothing they are wearing. To the left of the mirror are coats on wooden pegs and hats on wooden shelves above the coats. To the right of the mirror are gloves and neckerchiefs on wooden shelves.

Mock-up



Player Options

Four of each kind of:

- Hats
- Coats
- Gloves
- Neckerchief

Controls

Selection Controls

The player points at their selection with their right hand and gesture towards themselves with their left

“Done” Button

The player hovers the cursor over the done button for a set amount of time.

Placing the Ties

The player lays down the railroad ties at the end of the track with another person (NPC or player depending on how many are playing). The two must work together to pick up, carry, and lay down a railroad tie at a steady rate.

Perspective: Third Person - Side view

Flow

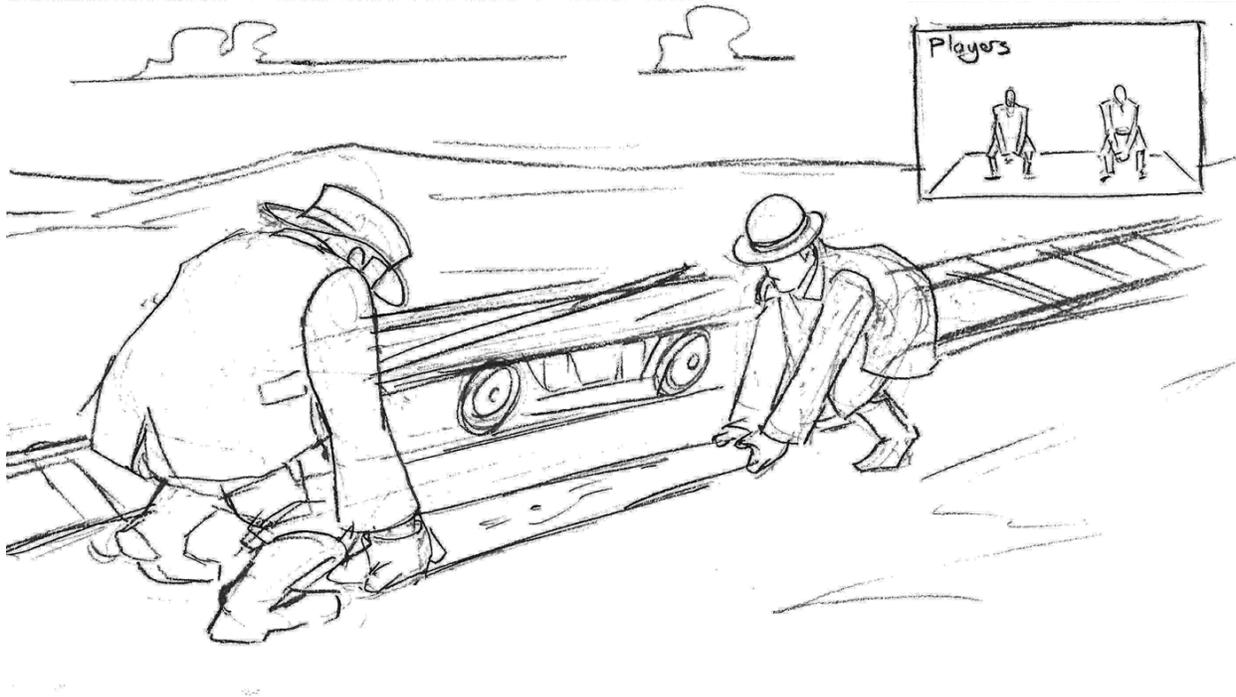
- I. Transition: the camera sweeps to the side of the flat cart where a ready tie rests on the ground. The avatars run onto the scene, one from each side
 - a. If it is just 1 player, the player's avatar runs in from the left and a random npc runs in from the right.
- II. Casement: Gives a little context for what the player is doing.
 - a. Script Reference: PlacingTheTies-Casement-1
- III. The avatars move to stand over the tie, ready to pick it up.
- IV. Narrator: Explains the actions required to pick up the tie.
 - a. Script Reference: PlacingTheTies-Narrator-1
- V. Lifting the Tie: The players must bend down and act as though they are picking up the railroad tie. The player's main objective is to keep their end of the tie within a certain range of their partners.
 - a. To pick up the rail, the player bends down. Once they are low enough, their character will grasp the tie. Then the player just needs to stand up
 - b. If there are two players, this means keeping coordinated to keep the tie level.
 - c. If there is one player, it means keeping at the rate set by the NPC.
 - i. The NPC doesn't lift until the player starts
- VI. Casement: Transitions back from taking the photo.
 - a. Script Reference: PlacingTheTies -Casement-2
- VII. Narrator: Narrator explains what the player must do while moving the tie.
 - a. Script Reference: PlacingTheTies-Narrator-2
- VIII. Moving the Tie: The player(s) must keep the tie level as their avatars move through the scene. The avatars will follow along a path to put the tie in the right place. The avatars walk at a default slow speed, but the player(s) may sway to increase the walk rate of their avatars.
 - a. If there are two players, the avatars move at the rate of the faster player.
 - b. If there is just one player, the avatar and NPC move at the rate of the player.
 - c. The camera follows the avatars from a side perspective.
- IX. Casement: Tells the player to lower the tie to the ground.
 - a. Script Reference: PlacingTheTies-Casement-3
- X. Narrator: Instructs the player to lower the tie
 - a. Script Reference: PlacingTheTies-Narrator3
- XI. Lowering the Tie: This portion plays out just like 'Lifting the Tie' except the players are lowering the tie. They must still keep the tie level as they lower it.
- XII. Pose for the Photographer: The player poses to get their photo taken. See "Posing for the Photographer" for more detail.

- XIII. Casement: Transitions the player to choosing the number of workers crew.
a. Script Reference: PlacingTheTies-Casement-4

Scene

The flat cart with equipment is the last cart on the rail. The cart carries mountains of ties and rails on top of it. The two avatars gather an unloaded tie that rests on the ground next to the cart. They then move the tie to the end of the track, continuing the track onward.

Mock-up



Controls

Lifting the Tie

The avatar's bend down animation is tied to the player(s)' hand position. When the player(s) stand up all the way, animation is at frame 0. Bend down enough and the animation finishes and the character grasps the tie. Now, as the player stands up, the character stands up like before, but is carrying their side of the tie.

Moving the Tie

The player moves by swaying in place. The faster the player moves, the faster the avatar walks.

Lowering the Tie

Just like lifting the tie except when the player gets to the lowest position, their avatar releases the tie.

Choosing the Number of Workers on Rail Crew

The player on the left chooses how many people they think are required to lift a rail.
Perspective: First-Person

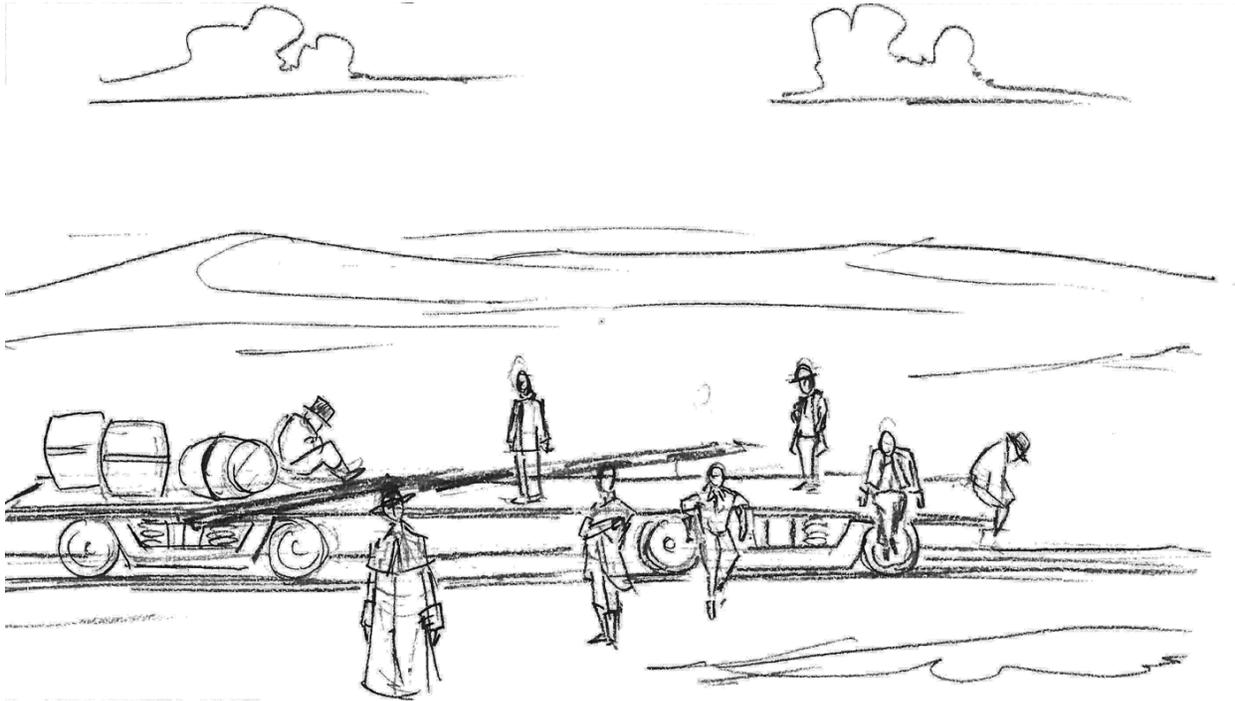
Flow

- I. Transition: The camera swings around to the side of the flat cart with equipment where a railroad rail lays waiting on the ground. An extra 6 workers move into the scene and stand in a line in front of the rail starting on the left.
- II. Casement: Re-establishes the task at hand
 - a. Script Reference: ChoosingRailCrew-Casement-1
- III. Narrator: Gives some instructions for the player's task
 - a. Script Reference: ChoosingRailCrew-Narrator-1
- IV. Choose the number of workers: Like all other selection, the player points at their choice with the right and gestures toward them with the left. Once a worker is selected, they step forward and wave.
 - a. The right answer is 5 if one player 4 if both players
 - b. Regardless of the number of players, it is only the player on the left who selects the additional workers
 - c. If the player guesses too many:
 - i. Casement: Casement corrects the player to have fewer workers
 1. Script Reference: ChoosingRailCrew-Casement-2
 - ii. The excess workers run off screen until the appropriate number of workers are left.
 - d. If the player guesses too few:
 - i. Casement: Casement corrects the player to have more workers
 1. Script Reference: ChoosingRailCrew-Casement-3
 - ii. Additional workers step forward and the rest of the unselected run off screen.
- V. Casement: Transitions the player into laying the rail.
 - a. Script Reference: ChoosingRailCrew-Casement-4

Scene

To the side of the flat cart with all the equipment.

Mock-up



Controls

Selection Controls

The player points at their selection with their right hand and gesture towards themselves with their left

“Done” Button

The player hovers the cursor over the done button for a set amount of time.

Laying Down the Rail

The player lays down the rail over the tie they just placed. Similar to placing the railroad tie, but with more workers involved. As a result, the player has less room for error.

Perspective: Third Person - Side View

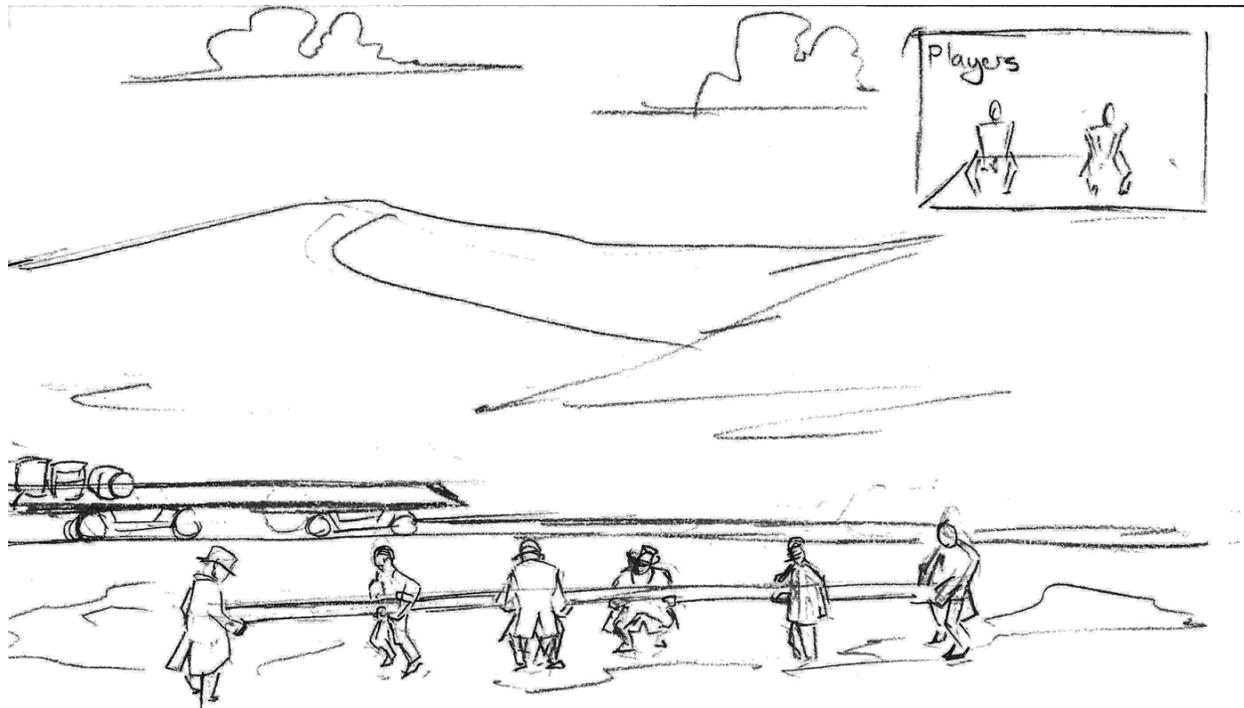
Flow

- I. The workers and the avatars from the last section split into 3's and stand over the rail on each side.
 - a. If two player, there should be one avatar on each side.
- II. Casement: Re-establishes the task at hand
 - a. Script Reference: LayingRail-Casement1
- III. Narrator: Gives the player instructions on the actions to take. Relates it back to Laying the Ties.
 - a. Script Reference: LayingRail-Narrator1
- IV. Casement: Gives the player a countdown for when to lift the rail.
 - a. Script Reference: LayingRail-Casement2
- V. Lifting the Rail: The player must lift the rail. All the other workers are bent down and are grasping the rail, waiting for the player(s). Once the player(s) bend down and their characters grasp the rail they start to lift the rail when they stand back up.
 - a. Regardless if it is one or two players, the players dictate when to start lifting, but the other characters set the pace.
 - b. No Gloves: If the player has no gloves as an accessory for their character then the "No Gloves" random event will occur. See *No Gloves* for more detail.
- VI. Casement: Transitions the player from lifting the rail to moving the rail
 - a. Script Reference: LayingRail-Casement-3
- VII. Narrator: Gives instructions to keep the rail level and to sway to carry the rail more quickly.
 - a. Script Reference: LayingRail-Narrator-2
- VIII. Moving the Rail: Similar to moving the tie, the players must keep the rail level. They may have the workers move faster by swaying faster.
- IX. Random Event: While the characters are moving the rail, a random event will occur. For more detail, see "Random Events"
- X. Casement: Transitions the workers into lowering the rails
 - a. Script Reference: LayingRail-Casement-4
- XI. Narrator: Instructs the player on how to lay down the rail.
 - a. Script Reference: LayingRail-Narrator-3
- XII. Lowering the Rail: Similar to lifting the Rail except the player is lowering it instead.
 - a. Once the rail is lowered (keeping the workers crouched):
 - i. Casement: Transitions into the gauging animation
 1. Script Reference: LayingRail-Casement-5
 - ii. A worker runs up, checks the gauge, and gives a thumbs up.
- XIII. Casement: Transitions the player towards driving in the spikes.
 - a. Script Reference: LayingRail-Casement-6

Scene

The characters are laying down the rail at the end of the track.

Mock-up



Driving in Spike

The player fastens the rail into place by driving in the railroad spike. The player(s) accomplish this by making a hammering motion in rhythm with their partner.

Flow

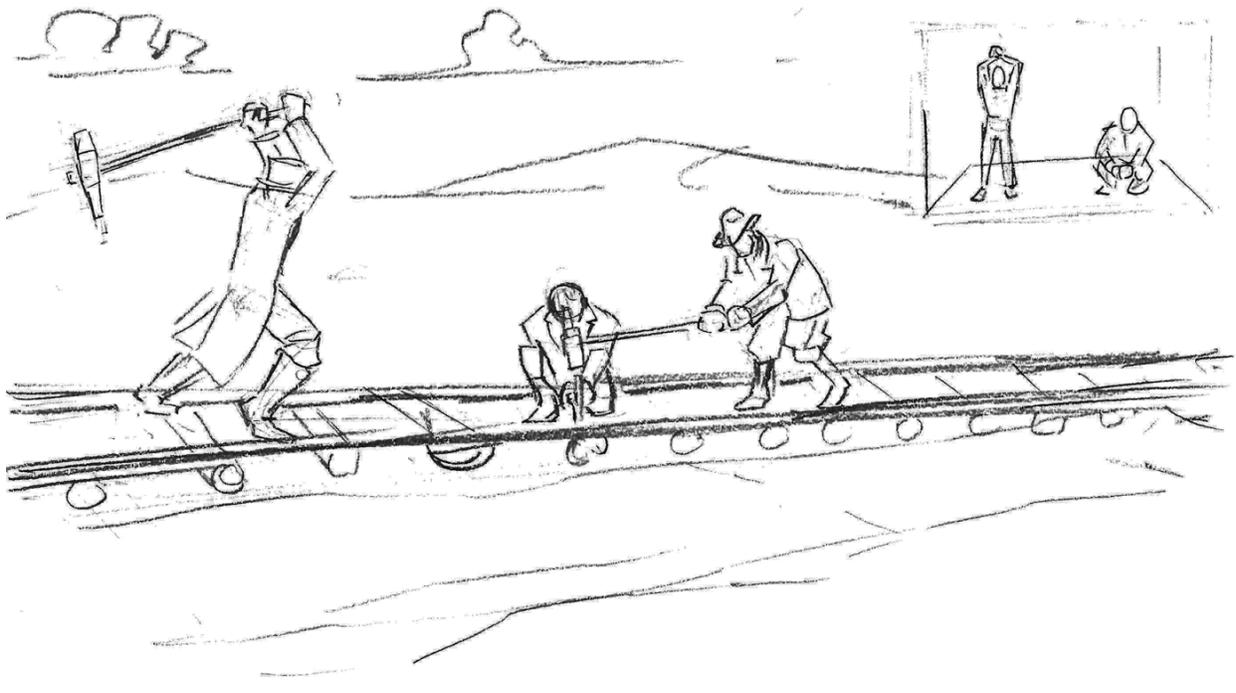
- I. Transition: The camera swings back towards the end of the track and looks at the newly placed rail at a 45 degree angle from the track. The player characters (or the player character and an NPC) walk onto the scene carrying large mauls.
- II. Casement: Gives the player some context for their actions of driving in the spike.
 - a. Script Reference: DrivingInTheSpike-Casement-1
- III. Narrator: Explains how to drive in the spike
 - a. Script Reference: DrivingInTheSpike-Narrator-1
- IV. Driving in the Spikes: The player(s) drive in the spike. To drive in the spike, the player makes a large, overhead swinging motion downward. The goal is to strike the spike when the player's partner is not. If player's hit each others' mauls, the charcter swinging blends to another animation where their hammer slips off causing a glancing blow.
 - a. If there is one player, the goal is to match the rhythm of the NPC

- b. If there are two players, they must find and maintain their own rhythm.
 - c. If two players, the spike is driven in after 15 total, the spike is driven into the ground.
 - d. If one player, the spike is driven in after 7 hits from the player.
- V. Casement: Congratulates the player and alludes to how many more miles the railroad has yet to go
- a. Script Reference:DrivingInTheSpikes-Casement-2

Scene

The end of the track where the rail was placed. A spike being held by a worker sit waiting for the players.

Mock-up



Controls

The player controls their character by making a large two handed overhead hammering motion while facing the screen. The animation of the character is tied to the position of the player's hands.

Closing

A pleasant view looking towards the future track with a few closing words from the Narrator and Casement.

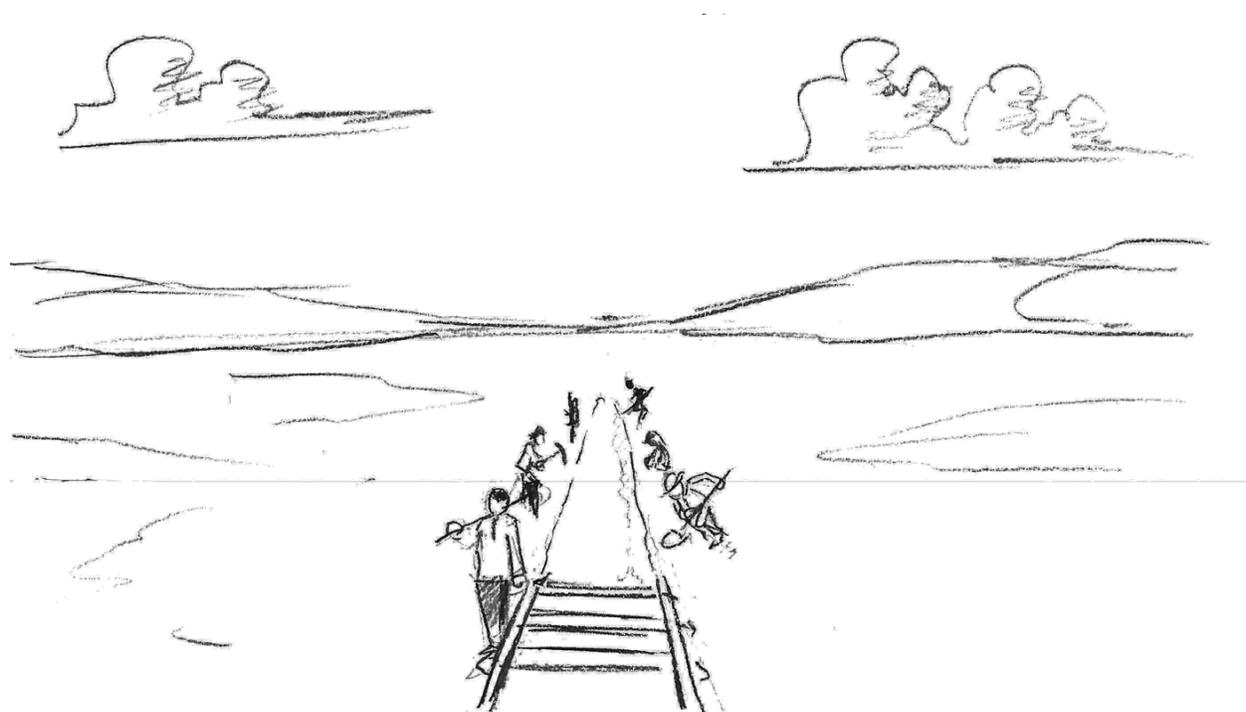
Flow

- I. Transition: The avatars and other workers walk off camera carrying their tools and head towards the flat cart for more railroad ties. The camera swings around to be on top of the track to look towards the future track where graters move on camera to begin grating, preparing for new track.
- II. Casement: Tells the men to grab another tie and gives an inspirational speech about the hard work and the accomplishment of the First Transcontinental Railroad
 - a. Script Reference: Closing-Casement-1
- III. Narrator: Informs the players that they may leave the exhibit now and reminds them about the kiosk to email themselves their photo.
 - a. Closing-Casement-1

Scene

The end of the track where the graters have started on the next section of track, moving and churning dirt in preparation for the next rail. Workers prep equipment, moving ties and rails, getting them ready to be placed.

Mock-Up



Controls

There will be no controls for the closing sequence.

Pose for the Photographer

Occurs during the “Place the Tie” segment. The player(s) must pose for a photographer. The game simulates the long exposure needed in the cameras back then

Flow

- I. Transition: None, takes place during “Place the Ties” segment.
- II. Casement: Interrupts and says they’re going to take a picture
 - a. Photographer-Casement-1
- III. Narrator: Gives historical context as to how the picture is simulating cameras from the 1860’s as well as instructs the player(s) where they can find the kiosk to email the photo’s to themselves
 - a. Photographer-Narrator-1
- IV. Taking a picture: A camera will take a picture and simulate the long exposure. After the players complete the game, they may email the photo to themselves from a separate kiosk.

Visual Design

- I. A 1280x1024 image will appear on screen that show says “Please Stand Still” at the top and a number 5 underneath it.
- II. The number 5 will count down to 1.
- III. After 1, the screen will flash and the 1280x1024 image will turn into a photo development effect, similar to what a polaroid looks like when you take it out of a camera.
- IV. The picture that was taken will then be displayed on the screen for an additional 3 seconds. After this the game will then move onto the NPC rail selection.

No Gloves

Player is burnt due to touching hot metal when picking up the rail in *Laying the Rail*. As a result, they drop rail, are reprimanded, and must pick it up again.

Flow

- I. After the player picks up the rail a burning sound occurs and the player and other workers drop the rail.
- II. Casement: Empathises with the player for burning their hands due to the lack of gloves.
 - a. NoGloves-Casement-1

Random Events

During *Laying the Rail*, a random event will occur that has different effects based off of what accessories the player chose earlier in the game.

Heat

The heat rises and players without hats become sunburned, requiring them to be more precise with their movements for a period of time. Heat waves appear over the scenery and the characters get sun burned. Any helper NPC's set a slower pace.

Flow

- I. Casement: Alludes to the heat and the relevance of a hat
 - a. Heat-Casement-1
- II. Narrator: Describes the effects of the heat in reference to gameplay and how it affected the workers at the time.
 - a. Heat-Narrator-1
- III. Heat: The Player(s) without hats have less leeway for their motions for 15 seconds.

Dust Storm

Wind resulting in a dust storm picks up around the player(s). Players without a neckerchief are affected. As a result, all actions must be more accurate for 15 seconds and any helper NPCs set a slower pace.

Flow

- I. Casement: Alludes in an incoming dust storm and the relevance of a neckerchief.
 - a. Dust-Casement-1
- II. Narrator: Describes the effect of the heat in terms of gameplay and how it affected the workers at the time.

- a. Dust-Narrator-1
- III. Wind: Wind picks up and a dust storm occurs. Lasts for 15 seconds. Represented to the player by wind sound effects and obscuring clouds of dust. Player(s)' motions are not given as much leeway during this time. In addition, NPC's require a slower pace for any work being done.

Rattlesnake

A rattlesnake appears while the player(s) are working. The rattlesnake threatens the avatars. The avatar must stay motionless until the snake slithers off.

Flow

- I. A rattlesnake slithers onto the screen in front of the avatars (or avatar and NPC) and starts rattling it's tail at the the two. The rail is dropped and everyone but the avatar(s) run away.
- II. Casement: Draws attention towards the snake and warns the player of potential danger.
 - a. Rattlesnake-Casement-1
- III. Narrator: Explains what the snake is going to do and how the player can avoid the snake.
 - a. Rattlesnake-Narrator-1
- IV. Rattlesnake: The rattlesnake threatens the avatar(s) after the workers run off. The snake will look from player to player, rattling and and hissing the whole time. The goal of the player(s) is to stand as motionless as possible. If they move too much, the snake will snap at them

Controls

The player must attempt to stay motionless

Props

The game will use various props. They are as follows

- Pick axe
- Shovel
- Maul
- Rail Gauge
 - 4' 8"
 - Used to check the distance between rails.
- Various types of spikes
- Ties
 - Cotton Wood and Pine

- average dimensions 7" H X 9" W and 8.5-9 ft long
- Very nonuniform
- Have the appearance of large branches with a single smooth to side to lay the rails on.
- Rails
 - 780 lbs
 - 39 ft long
 - Made of Iron
- Train Carts
 - 39 ft long

Screensaver

When the game is not currently in use it will be placed into a screensaver state. This will occur when the game is left idle for 1 minute, after the credits roll, and if the game is restarted. The screen saver will be a simple video that will have instruction overlaid on it. The instructions will be for the player(s) that wish to play they need to form a "t" position with their bodies.

Audio and Music

Audio

The soundscape for the game consists of sounds of the workers constructing the railroad. The construction area is filled with metal clanks of the mauls hitting the spikes, grunts and calls of the workers as they construct the railroad.

Game Music

The game will contain two orchestrated music tracks. The first track, a slower paced-waltz like song will be played during the game set up as the player is being registered by the Kinect. The aim of the track is to set up players experience, they are being transported back in time to 1866. Once the player begins gameplay, the main music track kicks in. This will be a faster paced orchestral track supplemented by harmonicas, fiddles, or other period instruments; but ultimately being mostly composed of a modern orchestra string arrangement. This underlying theme of this track will be unstoppable progress, "Hoedown" from "Rodeo" by Aaron Copland is a good example of the style of music we will be aiming for.