

Stacking

Game Design Document

V 1.3

Contents

Revision History.....	4
Game Overview.....	5
Concept.....	6
Game play Summary.....	6
Gameplay Example.....	7
Game Flow.....	8
Locations.....	8
Cinematics.....	10
Collecting.....	10
Replay.....	11
Extendibility.....	11
Target Platform.....	11
Feature Set.....	12
Game play.....	13
Game Structure.....	13
Adventure Structure.....	15
Challenge Structure.....	19
Matched Stacking Sets.....	27
Score Chores.....	28
Secondary Game play.....	31
Player Rewards.....	33
Adventure Return Visits.....	35
The Secret Hideout.....	36
Downloadable Content.....	37
Mechanics.....	39
Doll Stacking.....	39
Doll Abilities.....	40
Doll Attributes.....	44
Navigation Trail System.....	46
Talk System.....	46
Hint Text System.....	48
Doll Splitting.....	50
Save Game System.....	51

World.....	52
Overview.....	52
Locations.....	52
Characters.....	57
The Blackmore Family.....	57
Charlie Blackmore.....	58
The Baron Matroyshka.....	60
Levi the Hobo.....	62
Interface.....	64
Controls/Buttons.....	64
Front End.....	65
HUD.....	66
Tutorial Cards.....	69
Pause Menu.....	70
Loading Screens.....	72
Adventure Start Overlay.....	72
Camera.....	73
Audio.....	74
Music.....	74
Cinematics.....	75
Art Direction.....	76
Overview.....	76
World Style.....	78
Character Style.....	80
Closing.....	82
Estimated Play-through Time.....	82
Rating.....	82
Proposed Release.....	82
Production Milestones.....	83
Appendix 1: DLC Overview.....	86
DLC Pack One: Live and PSN Promotional Items.....	86
DLC Pack Two: Knight at the Museum Adventure.....	87

Revision History

V 1.0: Complete.

V1.1: Challenge Resets re-designed. Challenge Attributes expanded. Challenge “all solved” state added. Challenge Reset Sequence added. Additional Detail provided on Challenge Structure. Production Milestones Added.

V1.2: Added final milestone dates; added DLC design overview appendix section.

V1.3: Added Hint System. Added Score Chore System.

Game Overview



Concept

Stacking is a new style of adventure game, with a completely original game play mechanic. It tells a story of a family of Russian stacking dolls who have been separated by tough economic times, and of the youngest child's heroic efforts to bring his family back together again.

The Blackmore family's troubles began when their father, William, went off to work as a Chimney sweep in Baron Matroyshka's Meat Pie Factory. He never returned. One by one the other members of the Blackmore family had to take jobs of their own to pay the rent on the family cottage, and one by one they disappeared. Soon, no one was left in the house but the tiniest member of the family, little Charlie Blackmore.

Often called the runt of the litter, Charlie is one size smaller than any other doll in this world. He is all too accustomed to being overlooked and dismissed--too small to be of any consequence. But his size turns out to be Charlie's greatest strength. It allows him to jump inside of other, larger, dolls. Once inside another doll, Charlie's strong-willed nature (and determination to save his family) overwhelms his host, giving Charlie complete control. He can command the larger doll's actions and then jump inside even larger dolls, or use their special abilities to help him on his quest to reunite the Blackmores.

Game play Summary

The primary game play mechanic in *Stacking* is stacking itself. You control a Russian stacking doll style character who can walk around and explore a world inhabited by other Russian stacking doll styled characters. If you sneak up behind another doll--who is exactly one size larger than you--and press the STACK button, the larger doll will temporarily open up, and the smaller doll will jump inside. The player now controls the larger doll.



Every doll has a special ability which may be useful in solving a puzzle, or just fun to

perform. Some dolls can blow a whistle, others can only belch. Some can tap-dance, and some carry a wrench to fix things. Whenever you stack with a larger doll you now can perform that doll's special ability but not the ability of the smaller, inner doll.

In addition to the stacking command and the special ability, the player can also talk to other dolls to get clues or hear funny dialog.

Using these three simple abilities, the player can explore the world, gain access to new areas, and solve a wide variety of puzzles and challenges. Each of these challenges will have multiple solutions and the player can express themselves by solving them using their own combination of dolls and abilities.

Gameplay Example

In one of the early challenges of the game, the player must gain access to a lounge in order to stack with several train guild dolls found inside. Unfortunately, a guard blocks the locked entrance to the lounge and will not let anyone enter. The player must find a way to distract the guard or find another way in.

There are many dolls walking nearby in the busy concourse, and the player's attention is drawn to a rather striking woman. The player stacks with the woman and discovers that she has a special ability named "Seduce". The player activates the special ability, and the Guard, with small hearts suddenly trailing from his eyes, abandons his post and begins to follow the woman. The player has successfully distracted the Guard, and before he can return to his senses, the player un-stacks from the woman, circles around behind the distracted guard, and stacks inside him. The player is now in control of the Guard and can unlock the door to the lounge, allowing the player character to enter.



But this is only one way to solve the challenge. Using different combinations of abilities from other nearby dolls, the player could have used a distressed mom to scream for help, a maintenance man to open a vent panel big enough for a small-sized doll to squeeze through, or a large doll to push a parcel cart aside to reveal an alternate entrance into the lounge.

Game Flow

Charlie's adventures start in a train station, where he must rescue one of his brothers, who has been forced into hard labor with Baron Matroyshka's train company. Charlie frees his brother by resolving a train strike, which has the side benefit of getting the trains moving again. Charlie can then travel via train to new locations. In each of these locations there is another set of challenges before him, and another family member who needs to be freed.

Finding and stacking with a “matched set” of dolls is the primary goal of every location in *Stacking*. These matched sets of dolls are required to resolve a situation that exists in each of the locations, and allow Charlie to free one of his family members.

Each location will also introduce a doll that is one size bigger than any doll that the player has seen before. This will allow the player to increase how many dolls that they can stack with at once. Ramping up the size of the doll stack over the game will reinforce the feeling of player progression, allow for more complex challenges, and new character types.

As the player returns to the train station between traveling to other locations, the population of the train station will change. New dolls, themed from the locations that the player has visited, will be seen walking around the concourse, including some of the new larger doll sizes. By evolving the population of the train station, the player will be able to use these characters to solve new challenges and gain access to new platforms.

Locations

The Royal Train Station

The Royal Train Station is the first location in the game and serves as the hub world of *Stacking*. An expansive environment, this station houses many different coal-powered steam trains and other small locales, such as lounges, ticket offices, and service rooms. This bustling train station is in the throes of a labor strike when the player first arrives. Charlie's brother Albert has been forced to work in place of the adults on strike, and Charlie must find a way to end the labor strike and free his brother.

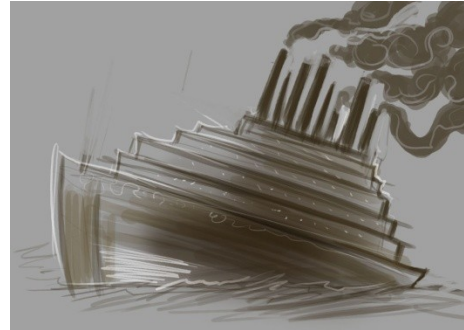


Charlie will solve additional minor challenges here in order to reveal trains that will take Charlie to new locations to free more of his family. The train station will evolve

over time, as the population of the train station changes and as new platforms and trains are discovered by the player.

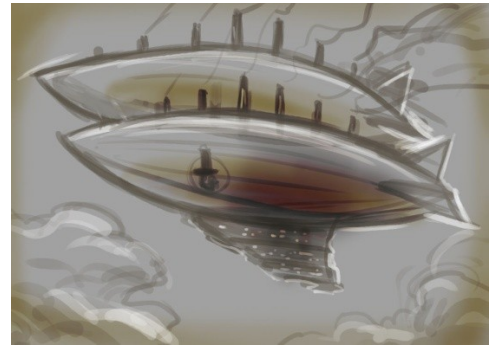
The Gilded Steam Ship

The Commodore Perry is Baron Matroyshka's newest and largest steam-powered cruise liner. Built for opulence, *The Commodore Perry* features several cascading layers of open deck where the affluent may take in the view. Charlie's sister Agatha has been conscripted to labor on a lengthy voyage. Charlie must convince a traveling group of international adventurers to incite a mutiny and return the ship to dock where his sister will be freed.



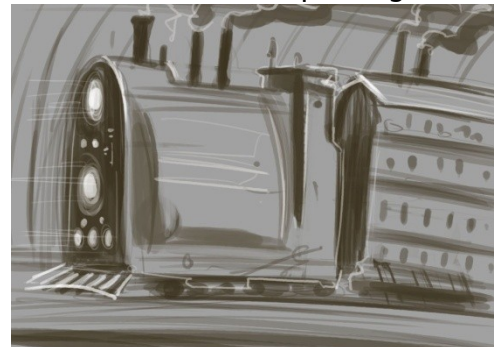
The Zeppelin of Consequence

Determined to own the luxury travel industry, the Baron Matroyshka's factories have created the most elaborate Zeppelin in history, *The Meriwether Lewis*. Held aloft by dual hydrogen filled envelopes and powered entirely by an onsite coal burning turbine, the size of *The Meriwether Lewis* is a true spectacle. Charlie's Sister Abigail is laboring here, forced to scurry through small access ways to keep the machinery of the Zeppelin working. Charlie uncovers a sabotage plot that he must stop to save a group of foreign dignitaries and to win his sister's freedom.



The Triple-Decker Tank Engine

The Baron's new triple-decker tank engine, *The Ignatius Valentine*, is departing the Royal Train Station on its inaugural voyage. The most ambitious train ever constructed, *the Ignatius Valentine* is powered by dual locomotives, found on both ends of the train. Charlie's oldest brother Archibald has been given the unfortunate task of slaving in the coal. The train is host to a traveling Norwegian circus, who has setup their big top inside one of the larger train cars. Charlie also discovers that this train is



carrying other illegal child laborers to the Baron's Meat Pie factory, and must stop this train in its tracks, both to save Archibald and to free the other children.

Cinematics



Cinematics in *Stacking* will be delivered in the style of a silent film movie that takes place on a miniature stage set. Character lines appear on the screen in the form of silent movie dialog cards, and the entire cinematic will be scored with piano music. Some of the other characteristics of old film, such as scratches, hairs, and edge vignettes will complete the experience.

Collecting

Collecting is an important part of *Stacking*. The player is encouraged and rewarded for collecting many things including unique dolls, matched stacking sets, and challenge solutions. The player's collection will be displayed on the walls of Charlie's secret hideout, a hidden area within the train station that only Charlie knows about. Large murals will be painted on the walls of the hideout chronicling Charlie's adventures.



Each location in the game will have its own wall in Charlie's hideout, featuring a large mural of that location and shelves to hold small figures of the dolls that he has

collected. The player will also unlock set pieces, portraits and other details that will add even more personality to the hideout.

Replay

Stacking has been designed to allow the casual gamer to have a fun play experience. One of the many ways that we intend to achieve this is by providing multiple solutions for all challenges in the game - to minimize any instances where a player might get “stuck”. However, we are also going to capture some more of the core gamers by providing a lot of replay.

Players will be able to replay challenges at any time, and does not require the player to restart from scratch or load a saved game. This will allow core gamers to collect all of the solutions to a challenge and receive the gamer rewards that they often hunt. Players will also be able to replay any completed levels to engage in optional game play such as collecting unique dolls or side challenges.

The interface is designed to constantly inform the player of replay possibilities. Whenever the player collects a unique doll or finds a solution to a challenge the player will be told of their success and reminded to find the remaining items.

Extendibility

Stacking will be built around the idea with future paid downloadable content (PDLC) in mind. New platforms and trains will be added to the train station to allow Charlie to embark on future adventures. Charlie’s secret hideout is built with expandability in mind, and additional walls and rooms will be used to display the new dolls and other collectibles that the player acquires in future PDLC adventures.

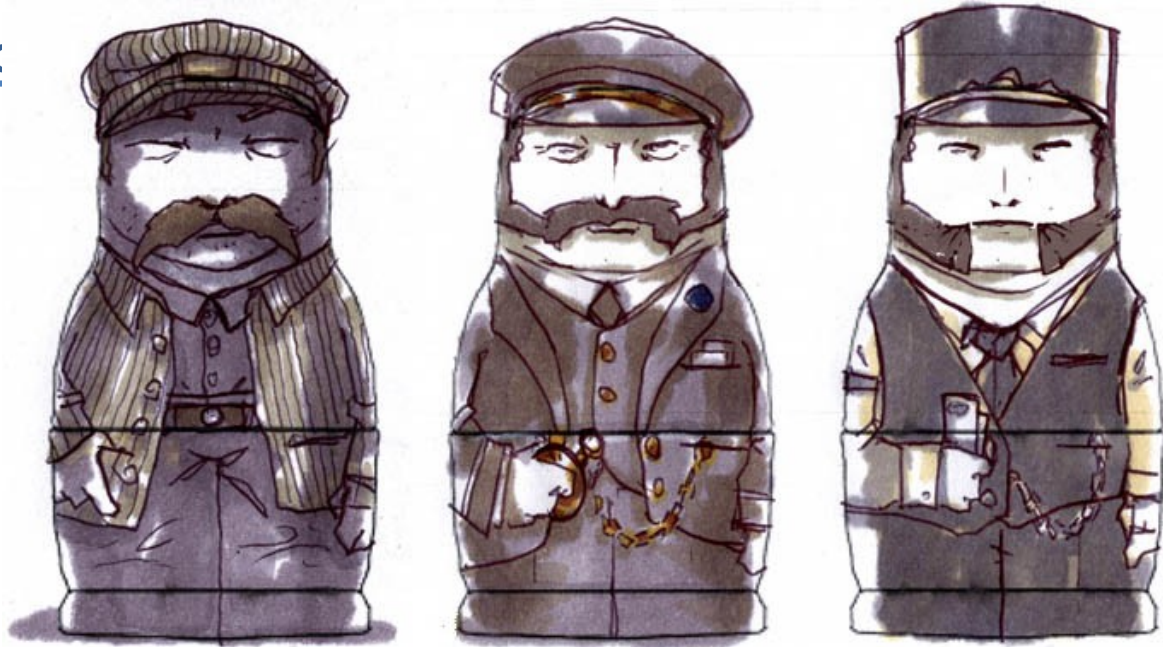
The front-end of Stacking is also designed to broadcast the availability of new PDLC to the player, to make it as easy as possible to purchase.

Target Platform

Stacking is being developed as a downloadable game to be delivered on the Xbox Live and PSN services.

Feature Set

- **Multiple-solution challenges.** All of the game's many challenges will feature multiple solutions. This feature innovates on the traditional adventure game structure and broadens the game's appeal by catering to a variety of play styles.
- **Character variety.** Stacking will feature a large amount of characters (dolls) for the player to find and stack with. Each character has a unique appearance, abilities, and dialog, providing the player with more game play variety than is usually possible in a smaller game.
- **Robust ability system.** Paired with the large amount of characters is a powerful ability system allowing for a large variety of abilities for the player to explore. These abilities can be used to solve challenges or just have to have fun watching the dolls and world react to them.
- **Replay and collection.** Stacking features a wide array of optional, secondary game play to extend the game experience. The player is encouraged to collect dolls and replay challenges to earn interesting rewards.
- **Rich story.** Silent movie style cinematics are employed to tell an engaging story in a fresh way. No spoken dialog allows for a great deal of storytelling in a small experience.
- **Visually striking.** Stacking features several advanced rendering features such as soft depth of field, screen post-effects, real-time ambient occlusion, and a rich material system to create a high fidelity experience with distinctive art direction.



Game Structure

Players **travel** to **locations** to go on **adventures** to find and rescue Charlie's family members. Once on an adventure, players must rescue their sibling before **returning** to the train station. When at the train station, players must do simple tasks to **unlock** trains to new locations.

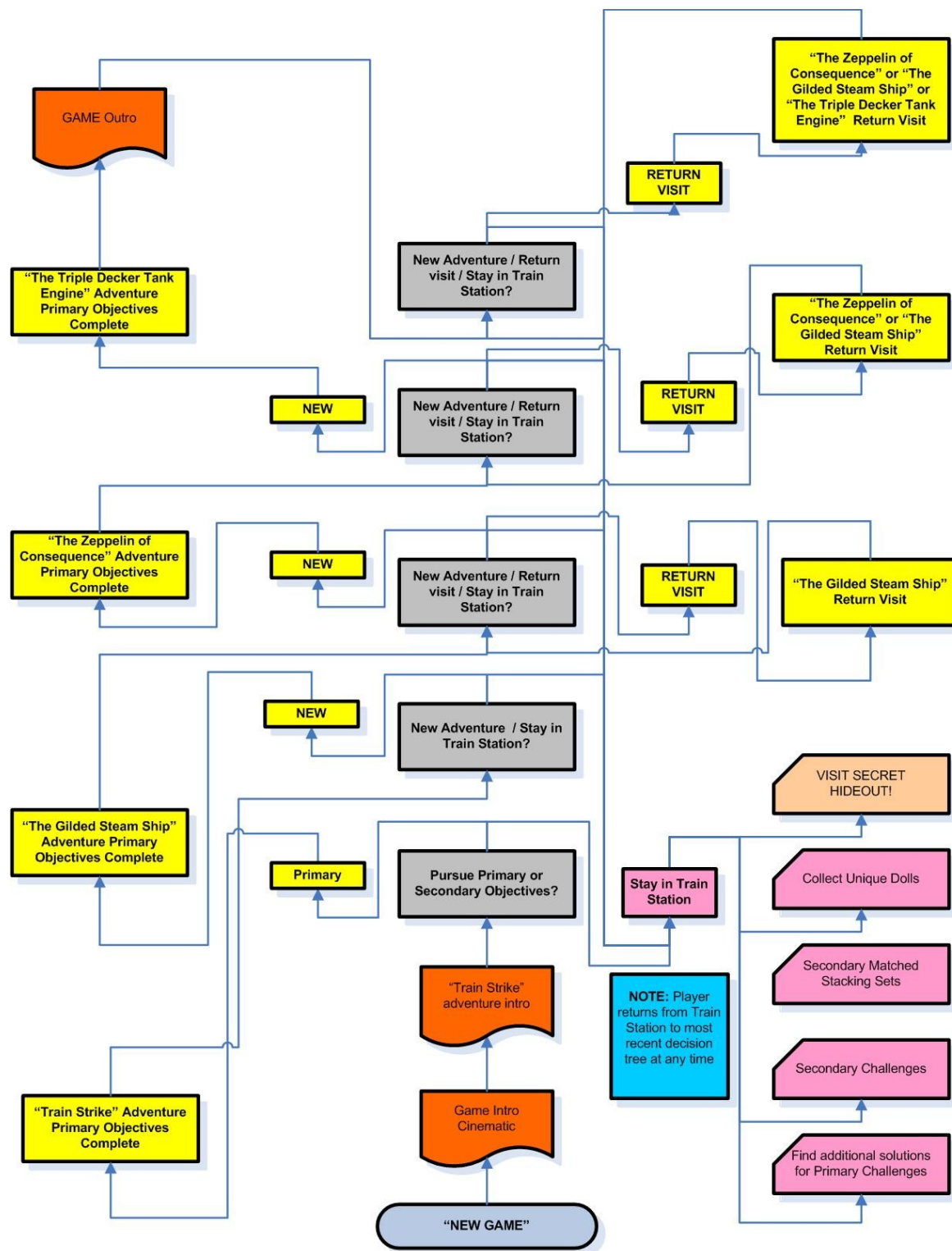
Also while at the train station, players may choose a **return visit** to any previous location where they have already rescued a family member.

Players may spend as much time as they want at the train station or on return visits engaging in optional, secondary game play to earn **player rewards**.



The player should never be confused about what is needed to do to advance the game. In addition to a strong narrative structure told through cinematics, frequent hint text and tutorial cards will be employed to ensure that the player is always able to progress the game.

Game Structure Flowchart



Adventure Structure

An adventure is the name for a set of primary objectives that must be completed at a specific location in order for Charlie to rescue a family member. In any adventure, **the primary objective is to find and stack with all members of primary matched stacking set of dolls.** To gain access to these dolls, players must find solutions for challenges. Adventures will occur either at the train station or in other world locations.

Train Station Adventures

Train Station Adventures are smaller adventures which take place solely in the train station. These adventures are typically either tutorials for learning the mechanics of the game, or they are small tasks required to unlock new trains that the player takes to new world locations.



World Location Adventures

World Location Adventures are larger adventures that take place at a world location outside of the train station. Each world location is self-contained in that the objectives and dolls are limited to that location. A subset of the unique dolls that a player collects during a world adventure will appear over time in the population of the train station, but it is not arbitrary or under the player's control. This limitation allows for more varied and interesting challenge and doll ability design, as well as facilitating adding new DLC world adventures at a later time.

Adventure Attributes

All adventures have the following attributes:

- **Only one adventure can be active at one time.**
- **All adventures have primary objectives;** the successful completion of which constitutes a successful primary play through.
- **All adventures have optional, secondary game play;** this includes unique doll collection, finding additional solutions for challenges, collecting secondary matched stacking sets, and solving secondary challenges. Players may engage in secondary game play while working towards the primary objectives or during a **return visit** to that location.
- **No adventures are fail-able.** The adventures are designed with no "fail" conditions that would force a player to restart the adventure.

- **All adventures support multiple game states** (see below).

Game States

“Game states” refer to changes in the world triggered by significant player actions that occur during an adventure. Game states are one way in which player progression is reflected in the game. Game states are auto-saved.

Game State Effects

When a new game state is triggered, several elements in the game may change:

- **Doll dialog.** Dialog will often change to reflect the new game state. For example, once the train strike is ended, instead of complaining about late trains, dolls may start extolling the virtues of the train company’s efficiency.
- **Doll appearance.** Dolls may change their appearance in some way to reflect the new game state. For example, when the train strike ends, the strikers put down their signs, and their angry faces become happy, smiling faces.
- **Doll behavior.** The most common example of new doll behavior will simply be a new waypoint or patrol path. When the train strike ends, for example, the strikers leave their posts near the train and make their way to near the lounge to celebrate their victory.
- **Adding / removing world objects.** Often times the look of the world may be altered to reflect a game state. For example, once the initial train strike is ended, the ticket area’s signs will change from “all trains delayed” to say “all trains on time”.

Game State Triggers

New game states typically occur as a result of one of the following:

- **Adventure primary objectives complete.** This is the most common trigger for a new game state. For example, in the first adventure of the game the player must help resolve a train strike. Once that objective is complete, the strike ends, which causes the trains to begin moving, the strikers to put down their signs, and the general population to stop complaining about the late trains. The game state that is set after the primary play-through will exist during any **return visits** that the player may make to that location.
- **Finding the first solution to a Challenge.** Players find solutions to challenges to gain access to matched stacking set dolls. A game state is usually set after the player finds the first solution to a challenge in order to change the behavior of the matched stacking set doll associated with that challenge. Because all challenges reset, this game state will ensure that the player does not have to find additional solutions to the challenge to achieve their primary objective of finding and stacking with the matched stacking set dolls. For example, in the “locked closet door challenge” the player must find

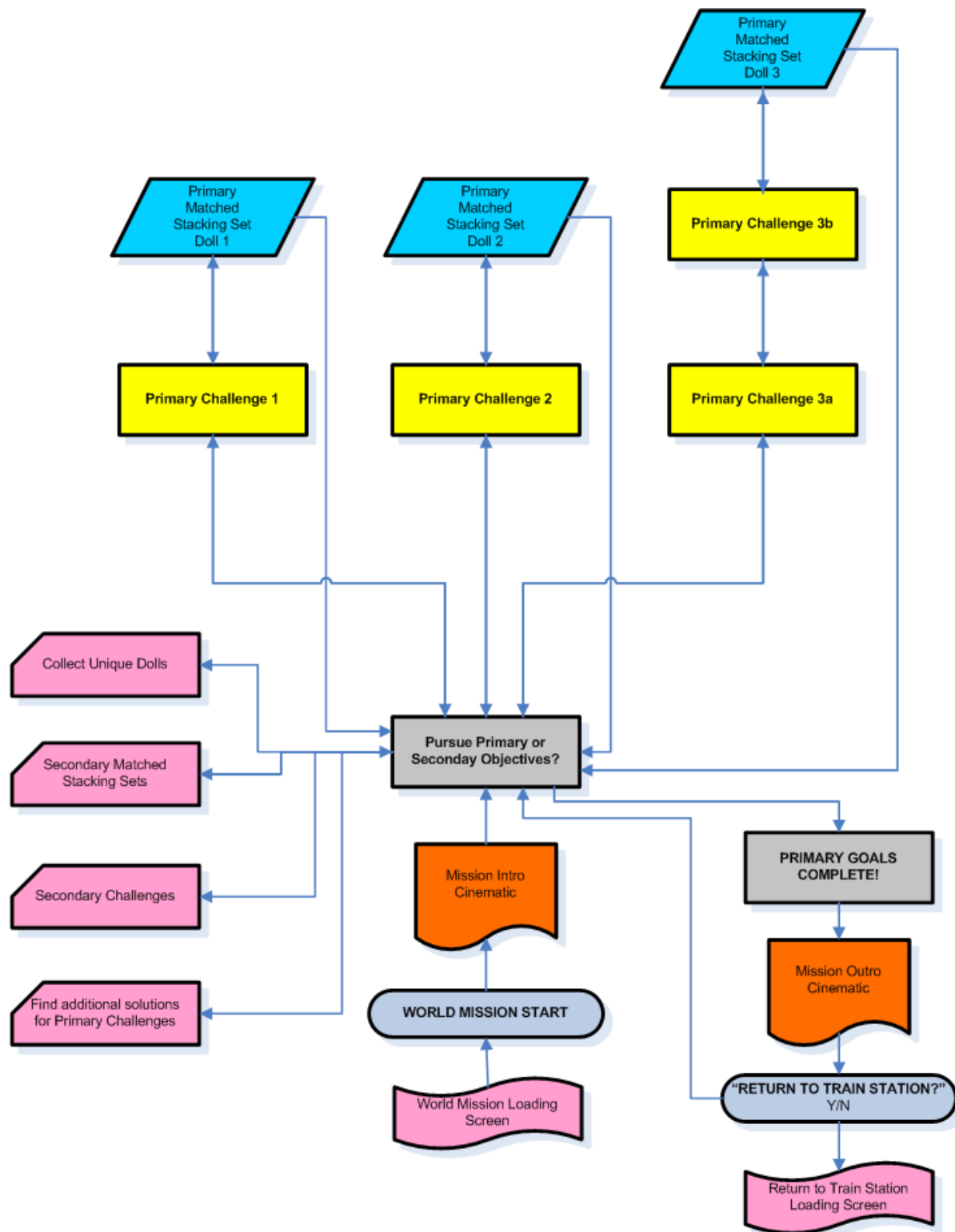
a way to unlock the closet door. The first time the player does this, the matched stacking set doll that is locked in the closet will be freed. The player finds and stacks with a porter and uses his special ability to unlock and open the closet door. This is the first solution that the player has found for that challenge, and a new game state is set. This game state changes the behavior of the matched stacking set doll who



was previously locked in the closet, but who now sets a new waypoint to go to the Library. Eventually, the player is tasked with taking all of the matched stacking set dolls to the library, so this game state facilitates the primary objectives. Once the player leaves the area, the locked closet door challenge resets, and the player could attempt to find additional solutions for this to earn player rewards. However, because the game state was set and the matched stacking set doll is no longer behind the challenge, the player is not REQUIRED to do it again.

- **Stacking all of a secondary matched stacking set of dolls.** When a player chooses to find and stack together all of the members of a secondary matched stacking set of dolls, they are rewarded with a cutscene. This cutscene usually resolves a situation concerning those dolls. Once the cutscene ends, those dolls will usually need new behaviors and dialog to reflect the resolution that was reached during the cutscene.

Adventure Structure Flowchart



Challenge Structure

Challenges are adventure game-style puzzles that the player must solve to progress the game. Challenges block access to matched stacking set dolls that the player must find to complete his primary objectives. Challenges are always solved through some combination of doll abilities, doll size attributes, or by using the talk system.



Challenge Attributes

All Challenges have the following attributes:

- **Name.** As the player enters the trigger volume for the challenge, its name will be displayed on the HUD. This allows the player to easily identify the various challenges of the game.
- **Multiple Solutions.** As the player enters a trigger volume for the challenge, the number of solutions, and the solutions that the player has already found, will be displayed on the HUD. This will remind the player that there are more, optional solutions to find, and rewards waiting. A typical challenge will have 3-6 solutions.
- **Solution Name / Number.** Every solution has both a name and a number. The first time a player encounters a challenge, he will know the number of solutions that exist for that challenge, as displayed in the HUD. The instant that the player successfully finds a solution for a challenge, the name for that particular solution will be displayed on screen.
- **Resettable/Replayable.** All challenges are designed to reset and be replayed until all of the solutions for a challenge have been found. Challenges will be designed so that they are always resettable; they cannot get “stuck” or be “destroyed” or “disabled”.
- **Hints.** Every player should always be able to find at least one solution to any challenge and continue forward with the game. To help insure this, the game will pay attention to how long a player spends on a challenge, and give the player the option to press a button to view a hint. This hint text will only

apply to one solution for each challenge. As the player spends more and more time on a challenge, the hints will get more and more obvious until finally the player is simply told what to do.

- **Challenge Volumes.** Challenge volumes are used to indicate when the CHALLENGE HUD should display. Whenever a player enters the Challenge Volume, the CHALLENGE HUD will display, showing the player the name of the Challenge and how many solutions have been found.
- **Solution Found Confirmation.** Because the challenge will reset after a solution has been found, it is critical that the player understand when they have successfully found a solution. In addition to the CHALLENGE HUD which will display to indicate which solution a player has found, some element of the world will also confirm that the player has found a solution. This could be a full-screen dialog card from a doll, an animated object, an important texture change, or a cinematic.
- **Matched Stacking Set Cinematic.** The first time a player successfully finds a solution to a Primary Challenge, any Primary Matched Stacking Set dolls located in that challenge will leave the area. This will be indicated by a cinematic, which will explain what has motivated the Matched Stacking Set doll(s) to leave. These dolls leave the challenge area so that the player has still advanced their primary objectives for the current adventure (which always involve finding and stacking Matched Stacking Set dolls) while also allowing the challenge to reset. In most cases, the Matched Stacking Set dolls will move to a known location that the player is trying to get them too.
- **All Solved State.** Once all of the solutions have been found for a challenge, it will be in its “all solved state” and no longer reset. This should feel like a small reward for the player, as that aspect of the world has been “permanently” changed by the player’s actions. For example, once the player has found all of the solutions for the “Empty the Lounge Challenge”, the lounge door will remain open, the Guard who blocked the door moves to a new location, and any patrons who have been chased out of the lounge will remain in their new locations. Dialog from dolls that are part of the challenge may also change.

Challenge solution difficulty

The goal of challenges is to support a variety of play styles by providing multiple solutions. For the more causal gamer, an easy solution will always be provided. More difficult solutions will be provided for core gamers who will be enticed with rewards to replay the challenges to find all of the solutions. The following are challenge solution difficulty guidelines:



- **Easy Difficulty.** Easy solutions will typically be based on obviously useful doll abilities. Dolls with these abilities will be found near the challenge. Talking to nearby dolls or dolls that are part of the challenge will result in hints. In addition, one easy difficulty solution will have additional hint text that the player receives if they spend too much time on a challenge without finding a solution.
- **Medium Difficulty.** These solutions may also be based on obviously useful doll abilities, but the dolls with those abilities may not be found directly next to the challenge. These solutions may also involve doll size attributes as part of the solution – such as using the mass of a large (size 3) doll to push something out of the way. Some medium difficulty challenges will require using multiple doll abilities together.
- **Hard Difficulty.** Hard solutions may involve using doll abilities in a logical, but esoteric or context-specific way. Hard solutions may also require using multiple doll abilities in a certain sequence with specific timing. Hard solutions may require dolls that are harder to find or in an earlier part of the level.

Challenge complexity

Challenges will gradually ramp up in complexity over the course of the game. Careful attention will be paid to ensure that the casual player is not left behind; however, without some increase in complexity the player will have a flat play experience. As challenges increase in complexity, they will still feature multiple solutions that are easy, medium and hard difficulty. Here are a few ways that challenges may increase in complexity:

- **Combinations.** The game's challenges will gradually move to requiring the player to use two or more dolls in a certain sequence to solve the challenge. For example, a large (size 3) doll may be required to push something out of the way to reveal a hole that a small (size 1) doll can enter.
- **Timing.** Related to combinations is the concept of timing, which involves using more than one doll to solve a challenge in a certain sequence *within a certain time frame*. For example, a vertical obstacle blocks the player's path and it must be ascended to continue. The player stacks inside a small size

JUMPER doll, but finds that his JUMP special ability comes up a little short. The player then locates a medium size HOWLER doll whose special ability causes the doll to HOWL loudly, creating an up-draft of air for 3 seconds. To use these dolls together to solve the challenge, the player must first STACK the small JUMPER inside the medium HOWLER doll and position them near the obstacle. The player then activates the HOWL ability, quickly discards down to the small JUMPER doll, and then JUMPS up into the up-draft of air created by the HOWLER's special ability. This floats the JUMPER up past the vertical obstacle and the challenge has been passed. Timing is critical in this solution, because the HOWL ability "times out" after three seconds, and if the player is no longer in control of the HOWLER doll, he will return to the area that the player first found him in.

- **Physical/Social.** The game will initially rely more on solutions based on physical abilities, but as challenges become more complex, social elements will be added, challenging the player to consider solutions based on social context.

Challenge Replays & Resets

The player will be encouraged to replay challenges in a variety of ways:

- The name of the challenge, and how many solutions it has, is always clearly broadcast to a player on the HUD, tempting the player to find more solutions.
- For each solution the player discovers, they are rewarded by receiving a prop in their Secret Hideout (see Secret Hideout section for more details).
- If the player finds ALL of the solution for a particular challenge, they will be awarded an achievement/trophy and unlock some concept art.



To make finding multiple solutions possible, all challenges are designed to be **resettable**.

The goal with **challenge resets** is to allow the player the option of replaying a challenge as quick as possible. This will encourage and reward the core player who wants to try and find as many solutions as they can for a particular challenge.

Challenge resets are automatic, and the player will not have to think about how to reset a challenge. A challenge will reset when one of the following conditions is met:

- **A solution has been found.** A challenge will reset after the player has found any solution to a challenge.
- **Game Load.** All challenges in the current adventure are reset on a game load.

- **A Critical Challenge Doll Leave a Critical Challenge Volume.** If the player moves a Critical Challenge Doll out of a Critical Challenge Volume, the challenge will reset. The game will also create a duplicate, Doppelganger Doll to replace the original that has been moved outside of the Critical Challenge Volume. See the *Critical Challenge Dolls* section below for more details.

Challenge Reset Sequence

Challenges will most commonly reset when a player has successfully found a solution. In that case, the following sequence will occur:

- Player satisfies solution conditions.
- CHALLENGE HUD comes up; the solution that the player has found is highlighted.
- Solution Found confirmation occurs. This is some element of the world that indicates success (a doll says something, an object stops animating, an alarm goes off, etc).
- If it is the first time a player has solved the challenge AND it is a primary challenge, then a cinematic plays, showing the Matched Stacking Set doll(s) leaving the challenge area.
- After a few seconds, the screen will fade to black
- Challenge will reset. Player will be moved to a waypoint in front of the challenge.
- Screen will fade up from black.
- Player will be back in control and challenge will be ready to be replayed if the player wants.

Critical Challenge Dolls

Some challenges have “Critical Challenge Dolls” as part of their structure. These are dolls that are required to be present for the challenge to work properly. They usually are involved with one or more solutions. Critical Challenge Dolls are uncommon, and not all challenges have them.

If a challenge has any Critical Challenge Dolls, it will also have a **“Critical Challenge Volume”**. If the player stacks with a Critical Challenge Doll and leaves the Critical Doll Volume, a Doppelganger of that doll will be created and the challenge will be reset. When a challenge is reset this way, the screen does not fade to black like when a player finds a solution. In all likelihood the player will not even be aware that the challenge has been reset.

“Doppelganger Dolls” are duplicate versions of Critical Challenge Dolls that replace the original so that the challenge can reset and function properly. The doppelganger doll looks and behaves exactly like the original and has the same abilities. Because Doppelganger Dolls are a possibility, any Critical Challenge Dolls must be designed to still function properly when interacting with a duplicate version of themselves. In most cases, this will be some custom scripting and some unique dialog responses.

Challenge Design Checklist

In order for every challenge to support multiple solutions, several aspects of the design must be considered. The following is a checklist of those concerns:

- Is the Challenge setup easily understood by the player?
- Does the Challenge have a simple title that accurately describes the player's goal?
- Does the Challenge require any additional contextual setup when the player first encounters it? How is that done? Cinematic? Dialog?
- Is there at least one easy solution?
- Is there at least one medium solution?
- Is there at least one hard solution?
- Do any solutions involve dolls that can be used to solve other challenges?
- How is the solution confirmation handled? Is there some agent (non-matched stacking set doll, aspect of the environment, etc) in the challenge that broadcasts when the player has found a solution?
- Any Critical Challenge Dolls? Are they designed to work correctly with their Doppelganger?
- Are all aspects of the Challenge resettable?
- If the challenge has a primary matched stacking set doll, can all of the solutions function correctly without their presence?
- If this is a primary challenge, is there an "exit cinematic" designed for the primary doll when the first solution is found?
- What is the "all solutions found" state for the challenge?
- Do all solutions have some in-world hints? This could be dialog or models/textures/animations in the area.
- Is there hint text written for one easy solution? At least three progressively more obvious hints should be written.
- What happens in the "all solutions found" state? Is there any world or dialog changes?

Challenge Example

The "Enter the Lounge Challenge" is one of the first challenges of the game, where the player must gain access to the Royal Lounge. Once inside, the player's objective is to stack with the three Train Guild dolls and take them to the main platform. However, a guard, who turns to face the player and cannot be stacked, blocks the locked entrance to the lounge. The challenge breaks down in the following ways:

- **Easy Solutions**
 - **Fan-Tastic.** This solution involves the player stacking into the medium-sized Jasper, the clerk-of-the-works, and using his "maintain" ability to disable and open the fan/vent. This reveals a medium-sized vent passage that Jasper can take directly into the lounge.

- **Medium Solutions**

- **Blocked Passage.** A parcel cart blocks a vent to the side of the entry door. Any large sized doll must be used to push the parcel cart out of the way, revealing a small vent opening. The player must then discard down to any small doll and make their way into the lounge.
- **Come Hither.** The large doll the Widow Chastity must use her “seduce” ability on the guard blocking the door. Any male dolls within range will follow Chastity around while her ability is active. This gets the guard away from the door; however, the door is locked. The player can then unstack from Chastity, move behind the Guard, and stack with him. The player uses the Guard’s “open door” ability to open the lounge doors and then proceeds inside.
- **Distressed Mother.** This solution is similar to the Come Hither solution, but Ursula Alendorf is used instead of the Widow Chastity. Ursula’s “Scream for Help” ability will send all dolls within range running to help her. This ability doesn’t last as long, so it is slightly more challenge for the player to unstack from Ursula, move behind the Guard, and stack with him so the “open door” ability can be used on the lounge doors.

- **Hard Solutions**

- **Unauthorized Entry.** To find this solution, the player uses either the Widow Chastity or Ursula Alendorf to lead the Guard away from the door. Instead of using the Guard’s ability to open the door, the player uses Jasper’s “Maintain” ability on the door, which will also open it.
- **The Fug of War.** This is the hardest solution, because the doll needed for it is not found near the lounge, and it uses his ability in a context-specific way. To find this solution, the player must take Meriwether Malador over near the fan/vent, which is sucking air into the lounge, and use the “flatulate” ability there. This will draw in the “stink” to the lounge, driving everyone out (which opens the door and the Guard steps aside). Once the door is open, the player can walk right in.

Solution Hints:

- The game will initially display hint text that tries to lead the player to using Jasper to open the fan vent (the easy solution). The hints get progressively more obvious over time, until the player is just told to stack with Jasper and open the fan vent.
- Talking to Jasper will result in several lines of dialog about him being able to “open things” or “unlock things”.
- Any of the non-unique male and female Large Dolls that the player talks to will hint at their ability to push things out of the way.
- Any of the non-unique male and female Small Dolls that the player talks to will hint at their ability to fit into small spaces.
- Talking to the Guard will result in dialog about him not wavering from his post “unless you are a lady in need.”
- All of the unique dolls that are part of solutions for this challenge are wandering around in the area near the challenge, except for Meriwether Malador, who is used in the hard difficulty solution.
- Talking to the Widow Chastity will result in several comments about men not being able to resist her charms.
- Talking to Ursula Alendorf will result in a comment about screaming for help.
- Visual Effects of air being sucked into the vent fan may attract the player’s attention and lead to either the Jasper(easy) or Meriwether(hard) solution.
- Several tutorial cards are used to make sure the player sees critical messages relating to challenge solutions.

Resets:

As with all challenges, the “Enter the Lounge” challenge will reset if the player steps away from the entrance area (the challenge boundary is marked by a set of entrance steps). It’s worth noting that like all challenges, this challenge is designed so that the player can continue to find additional solutions regardless of whether or not he is pursuing the primary objective of stacking with the Train Guild dolls inside the lounge. Even if the train strike is over, it doesn’t negate the challenge - which is specifically to “enter the lounge”.



Matched Stacking Sets



Matched Stacking Sets are groups of dolls that are thematically connected. Matched Stacking Sets are comprised of one doll for each size in that set. For example, the Train Guild Matched Stacking Set (pictured above) is made up of a Ticketeer (small), Conductor (medium), and an Engineer (large).

When a player stacks with a doll who is a member of a matched stacking set, the HUD will display the name of the matched stacking set and how many dolls are in the set.

Matched Stacking Sets can be either primary or secondary.

Primary Matched Stacking Sets

The primary objective of adventures is to find and stack with all members of primary matched stacking set of dolls. In most adventures, the player then is required to do an additional small task once they have stacked with all of the dolls of a primary matched stacking set. For example, in the Train Strike Adventure, the player is required to take the Train Guild matched stacking set to the main platform to negotiate with the striking Coal Union.

Finding and stacking with primary matched stacking sets are required for a successful primary playthrough of an adventure. There will be only one primary matched stacking set per adventure.

Secondary Matched Stacking Sets

One or more secondary matched stacking sets may be found on any adventure. Secondary matched stacking sets are optional game play and are in no way requirements for completing a successful playthrough.

If a player finds and stacks together secondary matched stacking sets, they are immediately rewarded with a special cinematic (see the Player Rewards section for more details).

Score Chores

Overview

Score Chores are optional small tasks that a player can do to earn extra score. The Score Chore tab in the pause menu will display all of the names for the Score Chores in the current location, but not what the chore is. Although the names are a hint as to the nature of the chore, players will only reveal the details of a chore by doing one of the tasks. Successfully doing a Score Chore will trigger various UI elements to indicate that a Score Chore has been found. Some Score Chores will be placed along the main play-through path so that players, even when not trying at all, will discover some of them.

Score Chores involve using specific doll abilities in a certain context. Some of them will be logical and easy to find, others will be relatively obscure. The player can have any number of Score Chores “active” at any time in a given location/adventure. Score Chores are always self-contained within a particular location, and do not carry over between locations in any way. A player’s progress on any Score Chores in a location will be saved as part of the auto-save process.

The player will be made aware of Score Chores through a combination of HUD and Pause Menu elements.

Score Chore Pause Menu Tab

Score Chores have their own tab in the pause menu, which displays all pertinent information about score chores. The player can view all score chores and their progress (including completed score chores) in the Secondary Gameplay Tab of the pause menu. The player can have any number of active (uncompleted) score chores at any time. Only the score chores for the current adventure/location will be displayed.

TRAIN STATION SCORE CHORES

3 of 6 DISCOVERED

Blast to the Past. Flatulate on 10 elderly dolls... 3/10

Crossing Guard. Knock 5 people over with Full Steam Ahead... 1/5

A Little Refresher ?????

Ladies Man. Use Solicitor Barnabas to talk to 10 adult women... 4/10

The Black Widow ?????

Two Man Band

????

Score Chore Discovery

When a Score Chore is first discovered, the details of the chore will pop up center screen:

Blast to the Past...1/10

Flatulate on 10 elderly people

Score Chore Progress

When a player makes progress against an existing Score Chore, an alert will appear center screen:

Blast to the Past... 3/10

Score Chore Completion

When a Score Chore is completed, an addition HUD element will display displaying the score bonus that the player has earned. Since some score chores are completed when they are discovered (the player only has to do that particular chore once), the completion HUD will need to accommodate this case.

Blast to the Past **COMPLETED**

Flatulate on 10 elderly people

Score Bonus +50

Examples

Train Station

- **Blast to the Past.** Flatulate on 10 elderly dolls. Score Bonus +50.
- **Crossing Guard.** Knock 5 people down using the Full Steam Ahead ability. Score Bonus +50.
- **A Little Refresher (One Shot).** Use Hans “Pee Pants” ability in the bathroom. Score bonus +50.
- **Ladies Man.** Use Solicitor Barnabas to talk to 10 adult women. Talking to women in the female bathroom counts as double. Score Bonus +100.
- **The Black Widow (One Shot).** Seduce 5 adult men at once. Score Bonus +100
- **Two man Band (One Shot):** Use the Drummer or Tuba Player’s abilities near each other. This will result in a new animation where both play a new jam. Nearby dolls cheer. Score bonus +100.

Steam Ship

- **Steward Season.** Use the Hunter’s fire cork ability on 10 of the ship’s stewards. Score bonus +100.
- **A Golden Package.** Use Professor Ramses’ mummify ability on 5 of the ship’s crew. Score bonus +100.
- **A Mass Effect.** Perform the argyle illusion on 10 dolls. Score bonus +50
- **Lil’ Stinky.** Use Rich Kid’s Toot ability on 10 adults. Score bonus +50.
- **Broadsides!** Use the Pirate’s YAR! Ability to make 5 dolls faint. Score Bonus +100
- **Animal Farm (One Shot)** Stack Prestige, the Pelican, and the Bear together. Score Bonus +100.
- **Masquerade Ball.** Get 5 dolls “madeover” by the artist in the “Artistic Makeover” store. Score Bonus +100.

Secondary Game play

Stacking is filled with optional, secondary game play that the player can choose to pursue. Appealing to both casual and core gamers is one of main design goals of Stacking. One of the ways in which this is being accomplished is by investing in secondary game play systems. These systems will tempt the core gamer to spend much more time replaying adventures and challenges than they otherwise might, creating a deeper experience for that type of gamer. At the same time, this game play, while tempting, is purely optional, so very casual gamers who are looking for a light entertaining experience will not feel the burden of pursuing all of them.

In almost all cases, pursuing secondary game play translates to tangible player rewards (see the *Player Rewards* section of this document for details). The secondary game play systems include:

Unique Doll Collection

Every location is filled with dolls, some of which are unique. Whenever a player stacks with a unique doll, the HUD informs the player of this. The HUD will also list how many unique dolls remain in the current location each time one is captured, reminding the player that there are more to collect. In addition, each unique doll has a name that is displayed in the HUD, providing the player with a bit more personality than non-unique dolls. Each unique doll stacked unlocks a reward in the Secret Hideout (see *Player Rewards* section for details).

All dolls that are part of matched stacking sets (primary or secondary) are also unique dolls.

Finding Solutions for a Challenge

As detailed under the Challenge Structure section of this document, all challenges are designed with multiple solutions and can be immediately replayed. The player is told, via HUD, how many solutions exist and how many have been found whenever the player is near a challenge. Every time the player successfully finds a solution for a challenge, the solution name is displayed in the HUD.

Secondary Matched Stacking Sets

There will be additional opportunities around the level for the player to find and stack with secondary matched stacking sets. When a player stacks with a doll who is a member of a matched stacking set, the HUD will display the name of the matched stacking set. If a player stacks with all members of a secondary matched stacking set at the same time, they are rewarded with a new cinematic (see *Player Rewards* section for details).

Secondary Challenges

Many adventures will have secondary challenges that the player may try and solve. These challenges are not required for a primary playthrough. In many cases, these secondary challenges only present themselves after the player has completed successful primary playthrough of an adventure. Like primary challenges, they have multiple solutions. The player is rewarded for each solution found (see *Player Rewards* section for details).

Score

The player will have a score, whose total is based on both primary and secondary game play. To get a perfect score, a player would have to



successfully complete all of the primary and secondary game play in the game. The score is a tangible summary of the player's progression in the game, and motivates players to pursue secondary game play. The score will also be displayed on-line in leader boards.

The following chart shows the approximate score points a player will get for specific actions:

Player Action	Score
Each unique doll stacked	25
Every 10 dolls (unique or not) stacked	25
Every 10 dolls (unique or not) talked to	25
Completing matched primary stacking set	100
Completing matched secondary stacking set	100
Each solution found for a primary challenge	100
Each solution found for a secondary challenge	150
Completing a Score Chore	50 - 200
Completing primary playthrough of an adventure	500
Completing ALL of the secondary game play in an adventure	1000

Talking to Dolls

Talking to doll is useful from a game play standpoint because they often provide hints about how to solve challenges. However, talking to dolls also provides some interesting secondary game play. Dolls often say interesting things about the world they live in, giving the player a richer game play experience. A particular doll's dialog will change depending on what doll the player is stacked with at the time. Game states may also change a doll's dialog, making it rewarding and interesting for the player to talk to the same dolls over time.

Player Rewards

Players are rewarded for progressing through the game and engaging in both primary and secondary game play. Rewards can be immediate (score, reward cinematics), persistent (secret hideout) or meta (achievements, leader boards). The goal is for all types of players (casual, core) to feel that their accomplishments and progression through the game are acknowledged.

As new player rewards are unlocked the HUD will alert the player.

Some of the ways players are rewarded include:

Train Station Population

The population of the train station changes over time as the player progresses through the game. Some amount of dolls from a world location that the player has completed a primary play through of will appear in the train station the next time the player returns. This will provide the player with a sense that the world is expanding and changing as they experience new adventures.

Reward Cinematics

For each secondary matched stacking set that the player stacks together, they will receive an immediate reward cinematic. The cinematic reveals more story and context for the matched stacking set and enriches the player's view of the world. In addition, when the cinematic is complete, a game state is usually triggered, providing the matched stacking set dolls with new dialog and behaviors for the player to experience.

Figurines

For each unique doll that the player stacks with, a small figurine of that doll is added to a shelf in the player's secret hideout. See the *Secret Hideout* section of this document for details. Achievements are also given if a player stacks with all of the unique dolls in a location.

Wall Murals

For each primary play through of an adventure that the player completes, a new wall mural of that location will appear in the player's secret hideout. See the *Secret Hideout* section of this document for details.

Props

Every solution that a player finds for a challenge will result in a representative prop being added to the player's secret hideout. See the *Secret Hideout* section of this document for details.

Concept Art

If a player finds all of the solutions for a particular challenge, concept art will be unlocked. Players may view the concept art in the front-end. Achievements are also given if a player finds all of the solutions for a challenge.

Leader boards

The player's score will be viewable on on-line leader boards. See the *Secondary Game play* section of this document for details on Score.

Achievements/Trophies

Achievements and trophies will be reward to the player as the play through the game. The list includes:

- Stack all unique dolls in the Royal Train Station.
- Stack all unique dolls in the Gilded Steam Ship.
- Stack all unique dolls in the Zeppelin of Consequence.
- Stack all unique dolls in the Triple Decker Tank Engine.
- Find all solutions for any challenge (one for each challenge).
- Complete Royal Train Station Adventure.
- Complete Gilded Steam Ship Adventure.
- Complete Zeppelin of Consequence Adventure.
- Complete Triple Decker Tank Engine Adventure.
- Complete primary play through of game.
- Complete all secondary game play in game.



Adventure Return Visits

After a player has completed a primary play through of an adventure, they can later make a **return visit** to that location. Players may choose to do this to complete any secondary game play that they did not do on their first play through. To make a return visit to a location, the player simply boards the appropriate train in the train station.

The location will be in the post-primary play through game state that was set when the primary play through was completed. This will mean that the primary situation has been resolved and Charlie's family member has been rescued; however, all of the challenges and secondary game play that were present initially are still available.

For example, if the player completes a successful play through of the "End the Strike" adventure in the train station, several things will have changed. The strike will be over, which means that kids will no longer be shoveling coal, the train guild is no longer hidden in the lounge, and the coal union is no longer striking near the train platform. However, the player can still find solutions for the "Enter the Lounge" challenge; they can still find and interact with the kids, the train guild, and the coal union striker dolls. These dolls may be in different locations and have new dialog and behaviors, but they will not have been removed from the location.

The goal is to strike a balance between the player feeling like they are progressing the game and having a real impact on the world, but also allowing them the freedom to pursue secondary game play or re-experience an environment at their own pace.



The Secret Hideout

When Charlie sets out to save his family, he first arrives on a rail hand cart at an abandoned platform in the Royal Train Station. Through a passage, Charlie discovers a long-forgotten carriage house filled with simple building supplies such as wood, paint, and tools. The Hobo that Charlie stacked with to help pump the hand cart tells Charlie that they should make it their “secret hideout”. It turns out that this Hobo, Levi, is a rather talented artist down on his luck in this new industrial age.

With no other outlet for his creativity, Levi chronicles Charlie’s adventures by crafting figurines, painting murals, and constructing props using the building materials left behind. As the player progresses through the game, the secret hideout will develop and grow to reflect the player’s accomplishments.

Whenever the player completes an action that results in a new item being added to the secret hideout, the HUD will alert the player to his fact by displaying a “New Item Added to Secret Hideout” message. Whenever the player is in the train station, he may return to visit the secret hideout, look at its progress, and chat with Levi, who will always have something funny and interesting to say about Charlie’s adventures.

Downloadable Content

Stacking is being developed around the idea of adding additional adventures and dolls as downloadable content. While the details of the downloadable content are still being designed, several essential ingredients have already been integrated into the game.

DLC Train platform

A special DLC train platform is part of the train station that will ship in the initial game. This platform is designed to be the connection point for all DLC adventures. A locked door initially bars the player from entering this platform, but once DLC offerings are



available, it will be open. Players may enter the platform to find a new train and conductor waiting. When the player approaches the conductor to board the train, as is standard in the initial game, the conductor will inform the player that to ride this train, the appropriate DLC must be purchased.

This one train and platform will take the player to any potential DLC offerings. A simple in-game menu will let the player select their destination (DLC pack). By approaching it this way, unlimited amounts of DLC packs can be integrated into the game without requiring additional patches to update the entire train station.

When the appropriate train is selected, the player will be taken to the DLC adventure. Like the rest of initial game, these adventures will be self-contained – with all of the new challenges and dolls limited to this new DLC location.

New dolls in the train station

The one exception to the self-contained nature of the DLC locations is that, like in the initial game, some amount of the unique dolls from a completed adventure will become residents of the train station. Existing residents from the original game may even have new dialog for some of the new dolls. The intent with these features is to help the DLC feel integrated into the entire world and not just a “tacked on” offering.

New secret hideouts

The intent is to reward players playing through DLC adventures in the same ways that they are rewarded in the initial game. The secret hideout is a nice container for

most of these rewards, and space has been allocated in the train station to add new secret hideouts to display new rewards as needed.

Additional achievements / trophies

The achievement system in *Stacking* is being setup to make it possible to add additional achievements and trophies to new DLC offerings.

Front end integration

The start screen in the front end will feature an area that notifies the player when new DLC exists that the player hasn't yet purchased. If possible, there will be an option to link to the dashboard / Playstation store for easy purchasing.



Mechanics

Doll Stacking

Players take control of dolls by **stacking** with them. Stacking is the fundamental mechanic of the game and is very easy and rewarding to do. Whenever a player stacks with a new doll, they will immediately gain control of that doll and its special abilities.

To successfully stack with another doll, all of the following conditions must be true:

- The target doll must be **one size bigger** than the doll the player is currently controlling.
- The target doll must be **facing away** from the player. Dolls that are looking at the player cannot be stacked with.
- The target doll must be **within stacking range**.



If all of the above conditions are true, then the target doll will have a **blue glow appear** around it, letting the player know that the doll is a valid target and can be stacked with.

When a player stacks, the larger target doll temporarily opens up and the smaller doll will jump inside. The player is now in control of the larger doll, with all of the smaller dolls stacked inside. The player may now use any special abilities that the larger doll has, but not any abilities of the smaller dolls inside.

A player's **stack** is the name for all of the dolls that the player currently has stacked together. The amount of dolls that a player can have in their stack will change over time as larger dolls are introduced on new adventures.

Players may choose to **unstack** the largest doll in their stack at any time, which results in the outside doll jumping away and the player taking control of the doll the next size down. Once unstacked, a doll will resume its normal behaviors.

Doll Abilities

Every doll has a special ability. The player can use abilities of the largest doll that he is stacked with (which is always the one that is visible on the outside). Abilities of smaller dolls that are stacked inside may never be used.

Players use doll abilities to help **find solutions to challenges**. Since the game has no inventory, the doll abilities effectively fill this role from a mechanics standpoint. Doll abilities can affect the world in some way or cause **reactions** in other dolls.

In all cases, using abilities should be fun, whether it is because they are useful in solving challenges or because they generate humorous reactions from other dolls.

Ability Effects

When used, abilities will have effects on the player, other dolls, or the world.

The ability system and its effects use a “tagging” approach to specify how different types of dolls will react to its effects. This allows an ability to have both general effects and very specific effects as needed.

For example, the “Horrendous Sneeze” ability might be described the following way:

- Dolls with tags that the ability doesn’t look for will play a mild surprise reaction when this ability is used near them.
- Dolls with the “fancy” tag will walk away from the burp in disgust.
- Dolls tagged with the “child” tag will giggle.
- Dolls tagged with the “doctor” tag will generate a dialog response: “You should really see an apothecary about that, my good man.”



Because of the variety of dolls and abilities in the game, they are very difficult to describe from a systems standpoint; lots of custom scripting and exceptions will be involved when crafting the full range of abilities that will be present in *Stacking*. That being said, the intent is to create abilities that have multiple applications and feel “logical” to the player when they are used as part of solution to challenges.

The following list provides some categories and examples of abilities:

- **Physics**

- Greater/Lesser
“Push”
- Greater/Lesser
“Mass”
- Greater/Lesser
“Velocity”
- “Full Steam Ahead”:
Player moves forward with



increased velocity, mass, and “push” strength, which knocks other dolls from his path instead of slowing him down.

- **Vulnerability**

- Invulnerable to xx
- Vulnerable to xx
- “Hold Breath”: Player is invulnerable to stinky effects.

- **Attracts/Repels**

- Seductress: All male dolls within 10 meters follow her for 5 seconds.
- Mom: All male dolls within 10 meters run to her location that instant.
- Fart: All dolls within 5 meters run away. All dolls between 6-8 meters play “surprise” reaction.
- Vampire Hiss: All dolls without the “clergy” tag within 10 meters run away.

- **Social Status Changer** – “Tag you’re it!”

- Zombie: Target doll within 1 meter becomes zombie.
- Stinky: All dolls within 5 meters become stinky.

- **Navigation**

- Fly to Nest: Move to specified waypoint not reachable by normal movement.
- Long-Range Stack: increase stacking range to stack with inaccessible doll.
- Jump: Jump up 5 meters.
- Quick Turn

- **Trigger/Specific**

- Unlock door
- Pull lever

- **Doll Splitting** (see *Doll Splitting* section of this document for details)

- Cork-shooting blunderbuss: all small dolls hit with cork split.
- Crushing environment hazard: all dolls smaller than large split when crushed.

- **Vehicles**
 - Can ride xx vehicle
- **New Waypoint/Path**
 - Begin to Patrol
 - Stop patrolling
- **Camera**
 - Fish Eye: Change camera FOV to see more of the environment.
 - Eagle Eye: Pull camera back and up to provide a strategic view of the environment.
- **Post Effects**
 - Night Vision: Push out fog plane for increased visibility
 - Spot Weak point: Modify screen buffer to colorize weak areas of a challenge.
- **Look at**
 - Aligns with target for xx seconds
- **Misc Small Reactions**
 - Laugh
 - Clap
 - Cheer
 - Cough
 - Get Mad
 - Whistle
 - Dance
 - “Hmrph!” reaction
 - Surprise
- **Faint**
 - Doll goes prone for xx seconds before standing up again.
- **Trigger Ability**
 - Causes target of ability to use their own ability as a reaction

Ability Attributes

Regardless of their effects, all abilities will have the following attributes:

- **Affects / Excludes**
 - Ability Affects only xx dolls
 - Ability excludes xx dolls
- **Duration / Time outs**
 - Duration – How long an ability is active.
 - Time out – The time between when the ability can be used again.
- **Target**
 - Single / multiple target
- **Range/Radius**
 - Radius (area affect)
 - Range
- **Reaction “Sets”**
 - An ability can have multiple “reaction sets” that define how the ability affects dolls are different ranges or with different “tags”.

Challenge Specific Ability Effects

In addition to their normal effects, **some abilities may have a context-specific effect on a challenge**. This is usually part of a hard difficulty solution for a particular challenge. Even though some of these uses may be a bit obscure, they should always feel logical to the player.

For example, the Flatulate ability causes most nearby dolls to run away in disgust. In an attempt to find a solution for the “Enter the Lounge” challenge, the player uses this ability on the Guard who blocks the player from entering. Instead of running away the guard turns his head and plays a “HRMPH!” response, indicating that he is made of tougher stuff and will not waver from his post.

The player notices a nearby fan/vent assembly which is sucking air into the Lounge. The player decides to flatulate into the fan, which blows the power of the flatulence into the Lounge. The Patrons announce that “they must escape this foul smell!” The guard stands aside, the door opens, and the patrons all run out. At this point, the player can make his way into the lounge through the open door. The player has solved the challenge using the Flatulate ability in a context-specific, but logical way.

Doll Attributes

In addition to special abilities, all dolls have also have size and movement attributes. Doll attributes will be a factor in some solutions to challenges.

Doll Size

All dolls have a size ranging from size 0 (tiny) to size 6 (XXX Large). Sizes 1 – 3 (small, medium, and large) are the most common sizes in the game. Charlie Blackmore is one of the smallest dolls in the world (size 0).

During the first adventure, only dolls of sizes 1-3 are present. As the player travels to new locations and completes new adventures, larger doll sizes are introduced.



Doll size has the following qualities:

- **Mass.** Although some dolls have special abilities that may alter mass, generally the larger the doll the greater the mass. This means that when a player is controlling a large (size 3) doll, they can slowly push a medium (size 2) doll out of the way. The greater the size difference between the dolls, the easier that they will be able to be pushed by the larger doll. Mass can also play a part in solutions where it may be used for things like pushing levers or weighing down switches.
- **Size Gating.** The size of a doll may limit what areas of the world they can navigate through. For example, a small (size 1) doll can fit in a air vent that larger dolls cannot, while a large (size 3) doll can maneuver over a bump that smaller dolls cannot.
- **Camera:** Each doll size has its own camera settings. While generally not used for game play in a specific way, the field of view, elevation, pitch and other camera settings change to give the player a feeling of being larger as he stacks with larger dolls.

Doll Movement

Basic doll movement in *Stacking* is very straightforward and simple. All dolls have a “creep”, “walk” and a “run” that seamlessly blends as the player uses the left analog stick to navigate the world. There will be very little complexity to navigation in *Stacking*, and when there is it will be associated an ability in a simple way. For example, a player may have a “jump” ability allowing them to jump over simple vertical blockades, but this ability will not spill over into a complex set of jump moves (double-jump, etc) that the player must learn and master.

Movement speed is generally based on doll size, but individual dolls can all have their own movement speeds. In addition, many dolls have special abilities that may change their movement speeds.

Unless AI-controlled dolls are being affected by a specific ability, they will generally not move at their maximum speed. This makes it easier for the player to catch up to them and stack when needed.

Navigation Trail System

The navigation trail is a system that is designed to aid lost players during an adventure. While the world layouts will generally be very simple, the navigation trail will help ensure that casual gamers don't get confused while pursuing the primary objectives of an adventure. Instead of presenting the player with a detailed map buried in a pause menu, the navigation trail is a simple way to help players progress through an adventure without leaving the main game screen.

To activate the navigation trail, the player simply holds down the Right Bumper and a series of glowing blue waypoints will appear in the world. These waypoints will lead the player to the closest primary challenge that no solutions have been found for. If all of the challenges have at least one solution found then the navigation trail will lead the player towards the final area in the adventure where the matched stacking set must be taken.

Talk System

The talk system allows the player to trigger scripted dialog from other dolls in the world. Talking to dolls serves both a game play and a world flavor function. Although talking to dolls will often result in hints about how to solve a challenge, it is also likely to trigger a doll's humorous observation on the world that they live in. Talking with dolls is a fun moment-to-moment game play experience that develops the fabric of the world and characters in a simple, economic way.



Doll dialog is displayed on-screen as an overlay that faces the player and scales as the player gets closer to or farther away from the doll that is talking.

Dolls will talk when:

- **The player approaches them and presses the “talk” button.**
- **The doll is reacting to an ability** that the player is using.
- **The dolls are reacting in a scripted way** to the player, usually associated with a challenge.

A particular doll's dialog will vary based on one or more of the following criteria:

- **The doll that the player is controlling.** Dolls can have any number of responses to other dolls, triggered using the same “tag” system that is used to determine how abilities affect particular dolls. For example, if the player talks to the lecherous “Solicitor Barnabas” doll while controlling a doll with a “female” tag, he will likely respond in a suggestive way. If the player speaks to the solicitor while controlling a doll with a “male” tag, he will respond in a somewhat demeaning way. Finally, if the player speaks to the solicitor with a doll with both “male” and “fancy” tags, the solicitor will respond to him as an equal.
- **The active game state.** A doll's dialog will often change when the game state changes. For example, once the train strike is ended, the train strikers dialog will shift from complaining about the Train Guild to speaking of celebrating their victory.
- **Where the conversation is taking place.** Dolls will sometimes change their dialog when in certain areas. For example, a doll may have different dialog if they are spoken to in the restroom than if they are talked to in the lounge.

Hint Text System

Overview

The Stacking hint system is designed to help players find solutions for the games primary and secondary challenges. The system is player driven; to see hints the player must press a button to evoke the hint menu. By keeping the hint system player driven it cuts down on the amount of in-game pop-ups. It also ensures that players who are interested in solving the challenges without help are not exposed to hint text.

Solution and Challenge specific

Every challenge has three hints for each solution. The first hint is the least obvious while the third hint is the most explicit.

If a player has not found any solutions for a challenge, the hints displayed will be for the easiest solution. Once a player has found the solution that has been hinted, the hints will switch to a new solution. The hint system will proceed to switch solutions as the player solves the challenges that are being hinted at. When determining which solution to hint at next, the hint system will proceed from the easiest to the hardest solution, skipping any solutions that have already been found.

Hint Pause Menu Tab (Challenges Tab)

All of the Hints are stored and displayed in the Challenges tab of the pause menu. When the player presses the [Left Bumper] or [L1] the pause menu will display with the focus set to the Challenges tab. The hints for the current challenge (based on the player's location) will be displayed. If the player is not currently in any volume, the last challenge volume visited will be displayed. If the player has not yet entered a challenge volume a grayed out version of the interface will display along with the text "Enter a challenge to access hints".

In the Challenges tab, the player can navigate between all of the challenges in the current location. When a challenge is selected, the currently hinted solution will be displayed. There are three hints for each solution. To reveal a hint, the player simply presses the [x] or [square] button.

Once a solution for a challenge has been solved, the hints will be removed and new hints will be available for the new solution. If all the solutions for a challenge have been solved a "Congratulations! You have found all of the solutions for this challenge!" message will be displayed.

The hint text/challenges tab display will look something like the following:

CHALLENGES

[Empty the Lounge] | Sort the Line

Solutions Found 2/6

Hints:

Current Solution: Solution #3

Hint 1/3: Look for something orange.

Hint 2/3: ??????

Hint 3/3: ??????

(left stick) select challenge

(X) reveal hint

(B) return to game.

Hint Examples

The following hint examples are from the Empty the Lounge Challenge in the Train Station.

Fan-tastic

- Hint 1/3: Maintain your distance from the guard.
- Hint 2/3: The right tool can open the way.
- Hint 3/3: Fans are often in need of maintenance.

Come Hither

- Hint 1/3: The guard is easily distracted by beauty.
- Hint 2/3: The right woman has the key to his heart.
- Hint 3/3: But he has his own key.

Fug of War

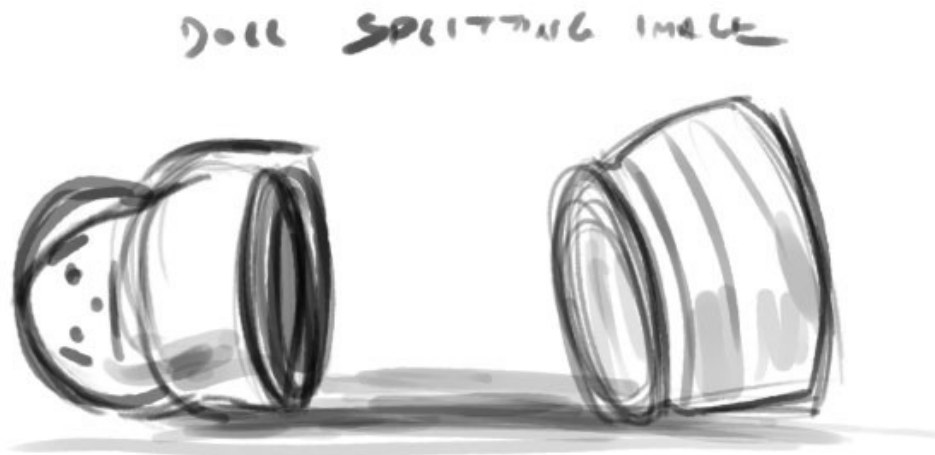
- Hint 1/3: If you can't join them, drive them out.
- Hint 2/3: The sense of smell can be a powerful ally.
- Hint 3/3: A foul man's fanfare will send them fleeing.

Doll Splitting

Although there is no combat in Stacking, some abilities may cause a doll to split into two pieces along the line where the doll would normally separate during stacking and unstacking. Dolls that are split will fall to the ground using a combination of animation and physics. After a time-out period, **split dolls will re-form to a complete doll, unharmed in anyway.**

If a player's doll is split, his outermost doll splits into two pieces and the remaining stack of dolls is "pushed" out of the range of the hazard or ability that caused the split. Like the other dolls in the world, any split player dolls will reform after a timeout period and can be re-stacked.

Charlie can never be shattered, and will only be pushed or blocked.



Save Game System

Stacking will have a simple, robust save system requiring minimal player input.

Save Slots

The game will support up to the three save slots. From the front end, the player can choose which save slot to use.

Autosave

All game saves will be done with an autosave approach. A small icon will be displayed on the HUD while the game saves. The game will set autosave points using the following criteria:

- Adventure introduction;
- Successful primary play through of an adventure;
- When first arriving at any new location;
- Checkpoints (designer placed waypoints during an adventure);
- Challenge introduction;
- Any challenge solution found;
- Any visit to the secret hideout;
- After any cinematic;
- After a new game state is set;
- After any unique doll is stacked;
- A matched stacking set is stacked together.

Reload

When the player reloads their game, they will return to the game at the closest “restart point” to where the game was last autosaved. The player will be in control of whatever dolls they had stacked during the autosave point. The exact positions of all patrolling dolls in the world are not preserved.

World

Overview

The world of *Stacking* exists as a parallel world to our own. Although the game is roughly set in the Victorian era, no mention of specific time periods or actual locations is ever mentioned in the game. The backdrop of the industrial revolution and the rapid changes that era brought with it are



analogous to the current information age revolution. Drawing from that historical period will provide our game a rich backdrop that will give it a timeless quality while also feeling contemporary on some level, as the dolls that makeup this brave new world struggle to make sense of their changing world.

Within the zeitgeist of the industrial revolution, the theme of travel or progression defines the game's locations. The player begins the game in a train station, moves to a cruise ship, then to a zeppelin, and finally the world's largest triple-decker train. These locations give the game a sense of unity and underscore the idea that the world is in a state of transition.

Another key ingredient in the world design is the concepts of "diorama" and "miniature". By incorporating small scale real-world objects into the environment, it gives the world its own identity separate from the historical influences. Elements like thread spools as wheels, matchbox suitcases, and popsicle stick wood flooring provide a lot of charm and visual interest to engage the player as they travel through the game.

Locations

Below is an overview for each of the main locations in the game as well as a summary sheet listing key dolls, challenges, and locations. The adventures in those

locations, as well as maps and final challenge designs, will be detailed in separate adventure design documents for each location.

The Royal Train Station

The Royal Train Station is the first location in the game and serves as the hub world of Stacking. An expansive environment, this station houses many different coal-powered steam trains and other small locales, such as lounges, ticket offices, and service rooms. This bustling train station is in the throes of a labor strike when the player first arrives. Charlie's brother Albert has been forced to work in place of the adults on strike, and Charlie must find a way to end the labor strike and free his brother.

Charlie will solve additional minor challenges here in order to reveal trains that will take Charlie to new locations to free more of his family. The train station will evolve over time, as the population of the train station changes and as new platforms and trains are discovered by the player.

Location Summary: The Royal Train Station

Objective	End the Train Strike by taking the Train Guild to speak to the Coal Union
Family Member Rescued	Brother Albert (size 1)
Primary Matched Stacking Set	The Train Guild: Train Ticketeer, Train Conductor, Train Engineer.
Primary Challenges	<i>Enter the Royal Lounge</i> (6 solutions)
Unique Dolls (not including Matched Stacking Set Dolls)	Meriwether Malador, Solicitor Barnabas, Strike Leader Chesley, The Widow Chastity, Clerk-of-the-works Jasper, Guard Perry
Secondary Matched Stacking Sets	Lost German Family: Ursula Alendorf, Lyudmilla Alendorf, Hans Alendorf.
Secondary Challenges	Sort the Line (activates in post strike state)
Key Areas	Main Concourse, Lounge, Ticket Area, Rotunda, Main Platform, DLC Platform, Abandoned Platform, Secret Hideout
Doll Sizes Active	1-3 (small, med, large)
Key Props	Parcel Cart, vent fan
End Game State	Strike Over: Kids free, Train to Steam Ship location active
Cinematics	<i>Coalition of the Unwilling</i> (intro), <i>The Spice of Life</i> (outro), <i>The Akzidental Tourists</i> (Lost German

	Family reward)

The Gilded Steam Ship

Charlie boards the Gilded Steam Ship in order to free his sister Agatha. The player learns from a cast away in the intro cinematic that Agatha and several other children were told that if they signed a contract to work for the full duration of one cruise, they would be set free. With little option in front of them, the children signed the contracts, thinking that at worst they would be signing up for two weeks of labor. In order to keep the children working indefinitely, the Baron has put the ship on a cruise that technically never ends. *The Commodore Perry* never docks or sets anchor, and the rich clientele are ferried to and from the ship from nearby ports.

Charlie also learns that a quartet of international adventurers, *Les Aventuriers du Grand*, is aboard the ship. These travelers have the fame and notoriety to incite a mutiny and force the ship's crew to return to dock, and therefore set the children free. Charlie must use his guile and talents to foul up their luxury travel experiences, so that they confront the ship's officers to complain. Once Charlie has assembled all of *Les Aventuriers du Grand* on the ship's bridge, he must stack them all together and incite a mutiny to force the Captain to return the ship to dock.

Location Summary: The Gilded Steam Ship

Objective	Return the ship to dock by helping incite a mutiny
Family Member Rescued	Sister Agatha (size 2)
Primary Matched Stacking Set	<i>Les Aventuriers du Grand</i> (The Grand Adventurers): Madame Habitant, The Hunter Darby, Doktor Exakt, and Professor Ramses
Primary Challenges	<i>Stop the Caviar Service, Spoil the Hunt, Sabotage the Exhibit, A Measured Mistake</i>
Unique Dolls (not including Matched Stacking Set Dolls)	Ship Captain, Ship First Mate, Rear Admiral Skillman, Gruel Chef, Caviar Chef, Exhibit Guard, Maitre D, Baby Giraffe, Mummy
Secondary Matched Stacking Sets	<i>One more show:</i> The Aging Illusionist, Illusionist's wife, and assistant
Secondary Challenges	<i>Put Out to Sea</i>
Key Areas	Open decks 1 -5; The Bridge, Inside the Smoke Stacks, Seaside Safari, Egyptian Exhibit, Map Room, The Commander's Buffet
Doll Sizes Active	1-4 (small, med, large, xlarge)

Key Props	Triple-decked Penny Farthling, Caviar Cauldron, Sarcophagus, Trick Ink Blotter
End Game State	At Dock: Kids free, Ship is in dock
Cinematics	Intro, Outro, <i>Lord of Confusion</i> (reward cutscene for secondary matched set)

The Zeppelin of Consequence

Charlie boards the Baron's mammoth airship, *The Meriwether Lewis*, in attempt to find and free his sister Abigail. While aboard, Charlie discovers a plot by the Welsh Resistance to disrupt an important meeting of foreign dignitaries. To free his sister, Charlie must help save the dignitaries and stop the sabotage so that the Zeppelin can land safely.

Location Summary: The Zeppelin of Consequence

Objective	Land the Zeppelin by saving the foreign dignitaries from certain disaster
Family Member Rescued	Sister Abigail (size 3)
Primary Matched Stacking Set	<i>The Dignitaries</i> : Kaiser Wroll, Arch Bishop Pious, Czar Bizarre, Tardu Mustafa, Prince Albertson
Primary Challenges	<i>Breakfast in Bed</i> , <i>Divine Intervention</i> , <i>Persistence of Mime</i> , <i>Coffee like Silt</i> , <i>Pretty in Parchment</i>
Unique Dolls (not including Matched Stacking Set Dolls)	Members of the <i>Welsh Underground Resistance</i> : <i>Gruffudd</i> , <i>Gwenllian</i> , <i>Cadell</i> , and <i>Ferch</i> , The Butler, The Mime, Altar Boy, The Squire Choir
Secondary Matched Stacking Sets	<i>The Stowaways</i> : Brice, Leander, Trixie, and "The Mitt"
Secondary Challenges	<i>A Pot of Gold</i>
Key Areas	Sky Bridge 1, Sky Bridge 2, Throne Room, Chapel, Luxury bedroom, Sky Cafe, bridge, inside the Envelope
Doll Sizes Active	1-5 (small, med, large, xlarge, xxlarge)
Key Props	Giant Propeller, Throne, Iron Clad Espresso Machine
End Game State	Zeppelin Landed: Kids free,

	Dignitaries Saved, Zeppelin open for visiting
Cinematics	Intro, Outro, <i>Ah! The Humanity</i> (secondary matched stacking set reward)

The Triple Decker Tank Engine

Charlie boards the Baron's new triple-decker tank engine, *The Ignatius Valentine*, on its inaugural voyage to save his brother Archibald. While on board, Charlie learns that the train is carrying a passenger car full of children to the Baron's meat pie factory. A world-renown traveling Norwegian circus, *Karneval av Dum*, is also on board, setup to deliver the show of a lifetime. Charlie must find all of the key circus performers to delay the show in hopes of stopping the train. Before the adventure ends, Charlie discovers that the Baron himself is on board, and Charlie must use all of his skill and cunning to win the Baron in one final challenge and free his family for good.

Location Summary: The Triple Decker Tank Engine	
Objective	Delay the circus performance and stop the train.
Family Member Rescued	Brother Archibald (size 4), Father William (size 6)
Primary Matched Stacking Set	<i>The Karneval av Dum</i> : Borg the Ice Clown, Ringmaster Rolf, Arvid the Acrobat, Johan the Terrible, Oda the Omnipotent, Ingrid the Invisible
Primary Challenges	<i>Chicken Saltimbocca, Allergic, O No!, Dread Lion Robert, Showdown with the Baron</i>
Unique Dolls (not including Matched Stacking Set Dolls)	The Baron Matroyshka (size 6), The Spice Trader, White Lion
Secondary Matched Stacking Sets	<i>The Gooseberry Smugglers</i> : Snowball, Napoleon, Old Major, Squeler, Pinkeye, Minimus
Secondary Challenges	<i>Sleeper Car no More</i>
Key Areas	Big top, Front Engine, Back Engine, The Baron's Luxury car, The kiddie car, The Dining Car
Doll Sizes Active	1-6 (small, med, large, xlarge, xxlarge, xxxlarge)
Key Props	Trampoline, Coal Pile, Manacles
End Game State	Train back in station: Kids free, family free, Baron's reign over, Train in station
Cinematics	Intro, Outro, <i>The Gooseberry Crumble</i> (reward cutscene for secondary matched stacking set)

Characters

Stacking is a game of characters. Every location is filled with new personalities, abilities, and dialog for the player to explore. Although the game features over sixty unique characters and abilities, the main story is told with relatively few characters. The game's narrative can be reduced down to the protagonist (*Charlie Blackmore*) traveling to locations to free his family (*The Blackmore Family*) from the industrial devices of the antagonist (*The Baron Matroyshka*). Along the way Charlie befriends a hobo, *Levi*, who helps Charlie build a secret hideout in the train station.

Below is an overview for the main story characters as well as a summary sheet that lists key elements of their personality and backstory.

The Blackmore Family

The Blackmore family has long been a family of Chimney Sweeps. Although one of the oldest professions in the developed world, Chimney Sweeps were often ignored and derided because of the arduous, grimy nature of their work. However, with the world perched on the dawn of a new electric-powered industrial age, the demand for skilled chimney sweeps has exploded. The new factories, complex machines, and assembly lines have sprouted countless new chimneys that are in dire need of cleaning.

The father of the Blackmore family, William Blackmore, is a hard-working, well respected Chimney Sweep. William and his wife Eudora have five children: Archibald, Agatha, Abigail, Albert, and Charlie. William has always thought that as his children come of working age, they would apprentice as Chimney Sweeps and carry on in the family tradition.



With so many mouths to feed, William has always struggled to keep his family well kept. When the opportunity to become the Master Chimney Sweep for Baron Matroyshka's new Meat Pie factory presented itself, William had to accept. Even though it meant that William would have to move from the family's aging cottage on the outskirts of the city to factory housing, it was a choice that had to be made.

William promised that after some money was saved, the entire family would relocate to the city as well.

Charlie Blackmore

Of all the children in the Blackmore family, Charlie Blackmore is the least interested in being a Chimney Sweep. Charlie is the youngest of the Blackmore children and unusually small in size, but possesses a strong will and a thirst for adventure. Although Charlie loves his family dearly, something deep inside him is always searching for something more.

Charlie discovers early in the game that he has a rare talent. Usually when two characters stack together, the larger character envelops the smaller, taking control; however, once in a great while a doll comes along who can reverse that. Somehow, these uncommon individuals can stack inside dolls larger than themselves and remain in control.



IMAGE OF CHARLIE

Charlie is one of those dolls.

IDENTITY	
Name:	Charlie Blackmore
Age:	12
Gender:	Male
Nationality/Ethnicity:	English; "southie".
Parents:	William and Eudora Blackmore; loving parents who want the best for their children. Ultimately, they are a little neglectful due to the dreadful hours William must work. This often left Charlie to tend to himself and consequently he developed an independent spirit at a young age.
Siblings:	Charlie is the youngest of five. Brothers Albert and Archibald. Sisters Agatha and Rowena.
Significant Others:	He's just a kid for Christ sakes!
Location:	London
Religion:	Not sure if buys into all of that. His parents are Church of England.

Class:	Lower class; working poor.
Marital Status:	Single.
Education:	Still in primary school.
PHYSICAL	
Doll Size:	0 (Tiny)
Fat/Skinny:	Average build.
Tall/Short:	He's one of the shortest dolls alive.
Strong/Weak:	Physically weak due to his very small size.
Hair Color/Style:	Black hair, often tussled and slightly overgrown.
Style of Dress:	Hand-me-down school clothes from his brothers. Worn wool pants, suspenders, and simple long sleeve shirts pushed up to his elbows.
Attractive/Repulsive:	Average.
Unusual characteristics / markings / disabilities:	None.
BEHAVIOR	
Speech (accent / pitch / dialog tags)	Speaks without a lot of idioms or slang. He is meant to sound like he could be a contemporary kid from an undisclosed location.
Temperament (cheerful / grumpy)	Somewhere in the middle. "Determined" and "Strong Willed" are good terms to describe Charlie.
Social Skills:	Generally good, but will often cut to the chase if he's after something.
Ambitions / Desires:	To prove himself to his family.
Fears / Hates:	Afraid that what others have told him is true; that someone so small is of little use.
Hobbies / Obsessions:	Likes to collect things.
Special Talents:	He is one of those rare dolls who can stack inside of a larger doll and maintain control.
Self Image:	Ready to prove the world wrong.
Emotional Baggage:	Small size.
Secrets:	None.
Smoke / Drink:	No.
Self-destructive / defeating:	No.
Mannerisms:	
Intelligence:	Medium-High.
Strong / Weak:	Very mentally strong.

Leader / Follower:	A leader.
Mean / Kind:	Somewhere in the middle.
Right brained / Left brained:	Left Brained.
Brave / Fearful:	Brave.
Graceful / Clumsy:	Graceful.
Seeks attention / isolation:	Often tries to grab attention so that he will be noticed and make an impact.
Funny / serious:	Serious.
Mellow / energetic:	Energetic.
Humble / arrogant:	Somewhere in the middle. Charlie's determination and his desire to overcome those who would disparage him sometimes comes off as over confidence.
Favorite music:	Gypsy music.

The Baron Matroyshka

Not much is known about the origin of the Baron or how he quickly rose to become one of the most powerful industrialists. Recently, the Baron has diversified his business to include the luxury travel line. Seeking to squash his competition, the Baron and his minions have illegally employed child labor across his travel enterprises to cut costs and quicken expansion.

This is the situation that crosses the Baron's path with that of the Blackmore family. The Baron holds inside him a great secret, and it is this secret that is revealed during the final challenge of the game.



IDENTITY	
Name:	The Baron Matroyshka
Age:	53 1/2
Gender:	Male
Nationality/Ethnicity:	He's from an eastern European country that no longer exists.
Parents:	Orphan
Siblings:	Unknown
Significant Others:	Gives names and treats all of the modes of transportation in his luxury travel business as if they were members of his family.
Location:	London
Religion:	Catholic
Class:	Upper, upper class; dirty money rich.
Marital Status:	Single, never been married.
Education:	Claims to hold three doctorates. In reality, he never graduated from high school. He also claims to be a former Captain, going so far as to include military motifs into his clothing. This is also a false claim.
PHYSICAL	
Doll Size:	6 (XXX Large)
Fat/Skinny:	Fat

Tall/Short:	Tall (secretly he's one of the shortest dolls alive!)
Strong/Weak:	Strong
Hair Color/Style:	Balding, with a rim of black hair.
Style of Dress:	Tuxedos and dark-colored custom Victorian suits. He also incorporates bits of military uniforms, such as epilates, into his tuxedo. This "layering" of different styles very subtly hints at the false layers of his character.
Attractive/Repulsive:	Repulsive. Lecherous.
Unusual characteristics / markings / disabilities:	Monocle that switches eyes every time he's seen, thick black side-burns, and bad teeth.
BEHAVIOR	
Speech (accent / pitch / dialog tags)	Slight eastern European accent that manifests when he's very agitated.
Temperament (cheerful / grumpy)	Grumpy
Social Skills:	Chooses to ignore most social graces and uses his social status to flaunt power instead.
Ambitions / Desires:	To own all modes of transportation in Britain.
Fears / Hates:	Afraid of his secret being discovered or thought of as weak.
Hobbies / Obsessions:	Enjoys model ships in bottles. But rather than do it the proper way, he orders his workers to craft a new glass bottle around the ship after he's finished with the model.
Special Talents:	Like Charlie, he is one of those rare dolls who can stack inside of a larger doll and maintain control.
Self Image:	Sees himself as an insecure boy.
Emotional Baggage:	Small size.
Secrets:	The Baron's big secret is that he's one of the world's smallest dolls, and he has misused his special talent to stack with and control other key leaders of industry and rise to the top.
Smoke / Drink:	As much as the ESRB will allow him to.
Self-destructive / defeating:	Ultimately, he has no self love.
Mannerisms:	Does the "chicken head" when he's agitated. The top half of his body shakes from side to side when he's agitated or surprised. Tends to be timed with his accent slips.
Intelligence:	Medium-High.
Strong / Weak:	Weak emotionally.

Leader / Follower:	A leader.
Mean / Kind:	Mean.
Right brained / Left brained:	Left Brained.
Brave / Fearful:	Fearful.
Graceful / Clumsy:	Somewhere in the middle.
Seeks attention / isolation:	Seeks attention to reaffirm his façade, but ultimately he has no friends, loved ones, and only holds counsel with his wealth.
Funny / serious:	Serious.
Mellow / energetic:	Energetic.
Humble / arrogant:	Arrogant.
Favorite music:	Marching bands. Anything with a Glockenspiel.

Levi the Hobo

Levi first enters the game as Charlie learns that he has the rare talent to stack with larger dolls and remain in control. Charlie stacks with Levi in order to operate a manually-pumped rail cart to arrive at the Royal Train Station.

Levi is an unemployed artist, down on his luck in this industrial age. Like Charlie, Levi thirsts for adventure and is a rare talent. The two become fast friends and Levi helps Charlie create a secret hideout. As Charlie progresses through the game, Levi sculpts figures, paints murals, and decorates the hideout with remembrances of Charlie's adventures.

Levi serves as Charlie's only constant companion through the game and will offer helpful hints and tips and always have a funny, kind word for Charlie.



IMAGE OF LEVI THE HOBO

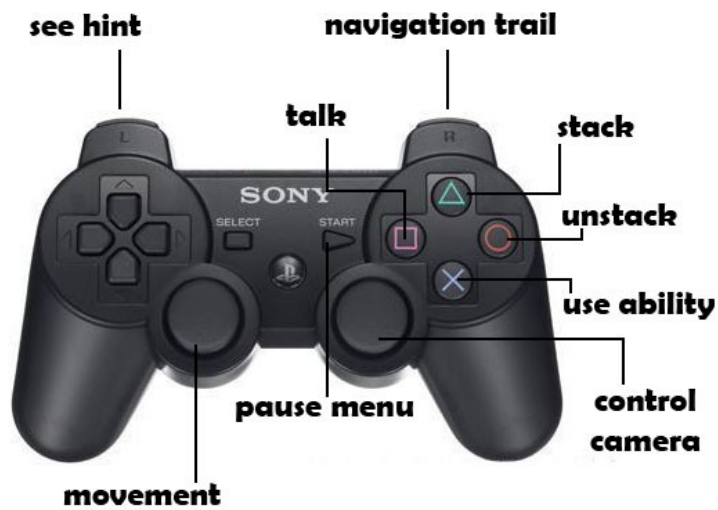
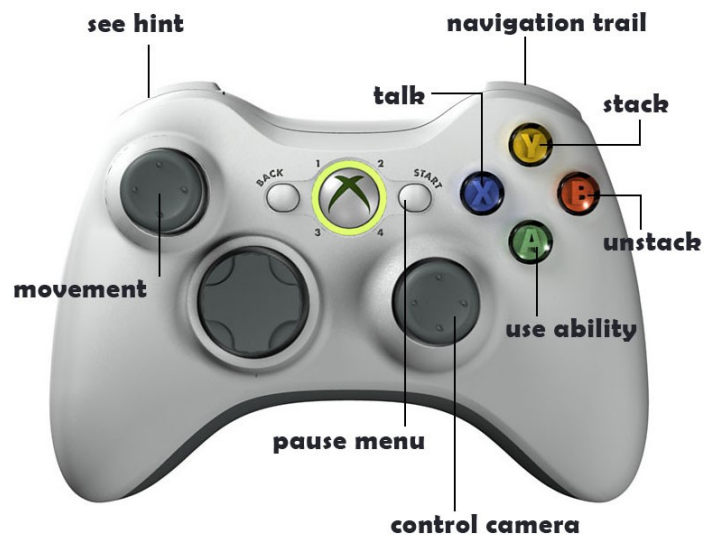
IDENTITY	
Name:	Levi
Age:	22
Gender:	Male
Nationality/Ethni	English; "southie".

city:	
Parents:	Father Rufus & Mother Hortence; both classically trained musicians of very modest means who relocated to Vienna when London's culture shifted full steam ahead towards industrialization.
Siblings:	Two younger sisters: Gertie and Myrtle. They relocated with the family.
Significant Others:	None Yet.
Location:	London
Religion:	Levi is a proto-existentialist.
Class:	Lower class; poor. Street Urchin; hobo.
Marital Status:	Single.
Education:	Primary and Secondary School. Apprenticed as a sculptor for one year.
PHYSICAL	
Doll Size:	Size 1 (small)
Fat/Skinny:	Average build.
Tall/Short:	Short
Strong/Weak:	Strong
Hair Color/Style:	Dark Hair, messy
Style of Dress:	Shoddy and patchwork.
Attractive/Repulsive:	Average.
Unusual characteristics / markings / disabilities:	Knobby elbows and short thumbs
BEHAVIOR	
Speech (accent / pitch / dialog tags)	Will often end a sentence by fading out, as if his mind has wandered to something else.
Temperament (cheerful / grumpy)	Cheerful
Social Skills:	Generally pleasant, but comes off as a bit odd and an outcast
Ambitions / Desires:	Simply to create
Fears / Hates:	Dislikes pungent cheeses
Hobbies / Obsessions:	Obsessively must modify his surroundings. Always tinkering.
Special Talents:	Sculpture, painting
Self Image:	Low self image
Emotional Baggage:	Misses his family
Secrets:	As a child, he once "frankensteined" two dead animals

	together.
Smoke / Drink:	Determined not to let frequent drink
Self-destructive / defeating:	A bit self defeating; feels the industrial world has turned its back on the arts.
Mannerisms:	Tends to switch topics a lot
Intelligence:	High
Strong / Weak:	Strong
Leader / Follower:	Follower
Mean / Kind:	Kind
Right brained / Left brained:	Right Brained
Brave / Fearful:	Somewhere in the middle
Graceful / Clumsy:	While creating art, graceful.
Seeks attention / isolation:	Wants recognition through his work – seeks positive approval from others when he has finished a work of art.
Funny / serious:	funny
Mellow / energetic:	energetic
Humble / arrogant:	humble
Favorite music:	Country music from India

Interface

Controls/Buttons



Front End

The design for the front end will be simple and straight-forward, allowing the player to quickly jump into the game. As with all of our interface elements, the front end will be generated using Scaleform (Flash).

The following elements will make up the front end:

- **Title Screen**
 - Press “Start” to play
 - **New DLC notification area**
 - This area will activate when new DLC exists that the player hasn’t yet purchased. If possible, there will be an option to link to the dashboard / Playstation store for easy purchasing.
- **New Game**
 - Pick from three save slots
- **Continue**
 - Loads last played game from
- **Load Game**
 - Pick from three save slots
- **Options**
 - Controller
 - Invert Y axis
 - Audio
 - Music volume
 - SFX volume
 - Video
 - Brightness
- **Bonus**
 - Concept art viewer
 - Credits

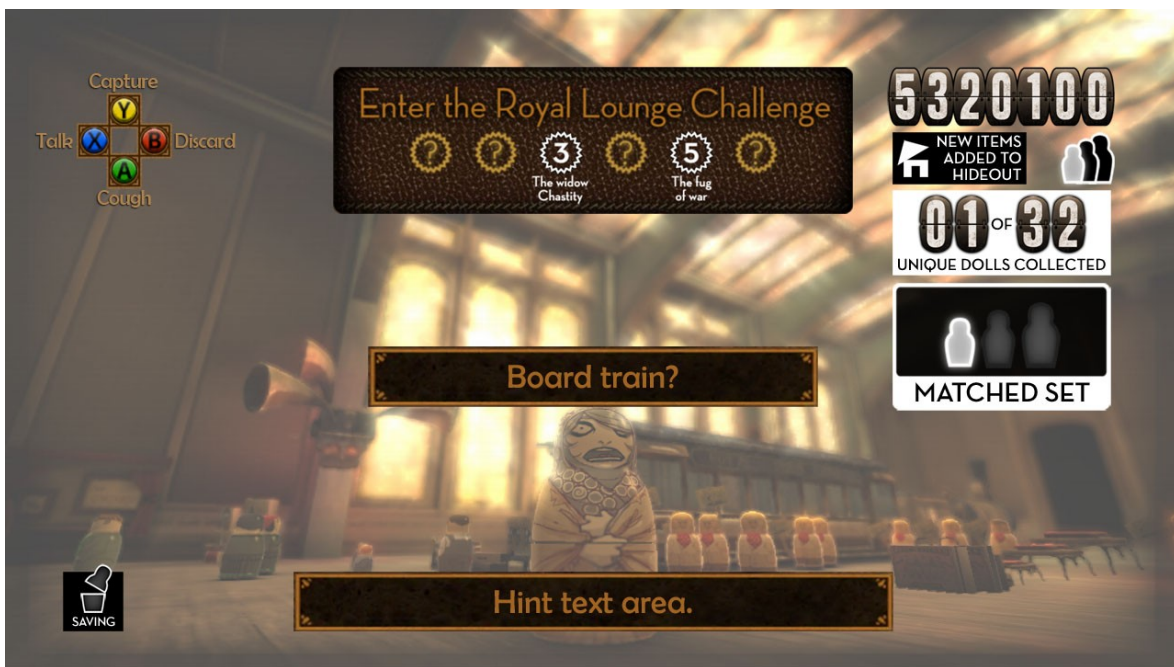
HUD

The HUD in Stacking will be simple but stylish. In addition to providing the player with a concise control layout, one of the primary functions of the HUD is to constantly alert the player as they progress the game. Collecting, challenge solutions, secret hideout rewards, hints, and score are some of the many items that will be well broadcast to the player as they advance through the game.

As with all of our interface elements, the HUD will be overlaid on the game using Scaleform (Flash).

Layout

The image below describes the rough layout of all of the HUD elements in the game.



Button Controls

The upper left of the screen will feature a button graphic layout listing the primary controls. The doll ability display will change to reflect whatever the currently controlled doll's special ability is.

Hint Text

The bottom center of the screen features a hint text area. This area will be used to give the player non-critical tutorial information as well as solution hints. This element will slide on and off the bottom of the screen as needed.

Score

The player's current score appears in the upper right of the screen whenever the player's score increases. After displaying for a few seconds, it will go away, leaving the screen uncluttered.

Secret Hideout Alert

Whenever the player has performed an action that unlocks a new reward in his secret hideout, (stacking with a new unique doll for example) a reminder alert will appear for a few seconds.

Challenges

When player enters the area near a challenge or successfully finds a solution for a challenge he is already near, the Challenge HUD will slide onto the screen for a few seconds. The challenge HUD provides the player with the following information:

- **Challenge Name.** The name of the challenge will be clearly displayed at the top of the HUD.
- **Solution info.** The number of solutions is displayed under the challenge name. If the solutions have yet to be found, they will be displayed as a series of question marks. If the player has found any of the solutions, they will be indicated with a number and name. In addition, when the player first finds a particular solution, a glow will animate around the solution that the player has just found.

Unique Doll Collection

Whenever the player stacks with a unique doll, a HUD element will display for a few seconds showing the player that they have collected a new unique doll. The HUD will tell the player the name of the unique doll and how many unique dolls remain to be found at the current location. For example, when the player first stacks with a unique doll in the train station, the HUD would display something like "Meriwether Malador. Unique doll collected! 1 of 13."

If the player stacks with a unique doll that they have previously stacked with, the only part of the unique doll HUD that will display will be the unique doll name.

Matched Stacking Set Display

Dolls that are part of a matched stacking set will have special attention called to them in the HUD. Whenever a player stacks with a doll that belongs to a matched set, regardless of whether or not it is the first time he stacks with that doll, the matched stacking set HUD will display for a few seconds.



The HUD displays the following information:

- **Name:** Every matched stacking set will have a specific name, separate from the name of the specific dolls that are part of that set. Examples include “Train Guild” and “Lost German Family”.
- **Primary or secondary:** The HUD should indicate whether the doll belongs to a primary or secondary matched stacking set. Primary sets are always part of the primary objectives of an adventure, while secondary sets are optional game play.
- **How many dolls of the matched stacking set are in the player’s stack.** Dolls from the matched set that the player is currently stacked with will be displayed as solid white icons while dolls that remain to be stacked will be displayed as empty outlines. The doll that the player has just stacked with will have an animated white glow.

Stack Status Indicator

The stack status indicator is a small icon that remains on screen and displays how many dolls that the player currently has in his stack (excluding Charlie). If the dolls belong to a matched stacking set they will be opaque white; otherwise, they will be black. For example, in their current stack, the player has a small doll that belongs to the “Train Guild” matched set, a medium doll that belongs to no sets, and a large doll that belongs to no sets. In this case, the stack status indicator would show three dolls, with the small doll being solid white, and the medium and large doll being displayed as black.



Board Train Prompt

A small dialog box will display on the screen when the player talks to a conductor of an operational train waiting to take the player to a world location. The prompt will display the name of the location and give the player the option of boarding the train or canceling.

This dialog box will also be used in the **DLC platform** to allow the player to choose to play a particular DLC adventure.

Autosave Icon

A small icon displays in the lower left of the screen when the game is performing an autosave.

Concept Art Unlocked Alert

When the player finds all of the solutions for a challenge, a new piece of concept art is unlocked and viewable in the front-end. An alert will display on screen for a few seconds to inform the player of this reward.

Tutorial Cards



Tutorial cards are full-screen cards that pop up when critical information needs to be delivered to the player. These cards have the same silent movie-inspired visual design as the dialog cards used in the cinematics. After the player is done reading these cards, they can press a button to dismiss them.

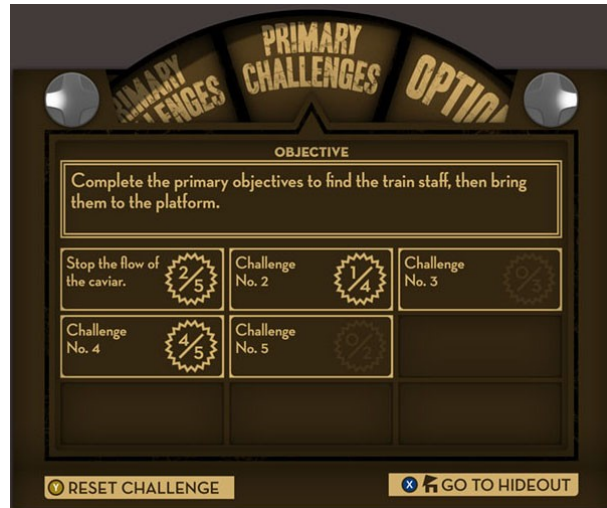
Because tutorial cards can pull the player out of the game experience, care will be taken to only use them when it is necessary for the player to receive critical game information.

Tutorial cards are typically used for:

- **Tutorial information.** Whenever a new game play element or mechanic is introduced to the player, it will be done in the form of a tutorial card.
- **Primary objectives for an adventure.** At the start of a new adventure, usually after the intro cinematic, the player is given the primary objectives in the form of a tutorial card. After the player dismisses the card, this information will be moved to the pause menu, where it will remain until the objectives are complete.
- **Critical challenge dialog.** Often times a player's exact facing or location will not be known during a challenge when critical dialog must be delivered from a character involved with the challenge. In these cases, tutorial cards are used to display the dialog.

Pause Menu

In addition to standard game options, the pause screen will serve a more detailed summary of the information that is presented to the player in the HUD. Even though a amount of information is kept here, presentation will be kept simple and stylish. The pause menu features several tabs that the player can page through using the bumper buttons. Attention will be paid to the visual design of the pause menu to make it clear to the player that there are multiple tabs.



as
fair
the

In addition to the tabs, there will be a “button bar” displayed along the bottom of the screen that will display common functions across all tabs.

As with all of our interface elements, the pause menu will be rendered using Scaleform (Flash).

Button Bar Controls

- **Quit Game.** This will quit the current game and return to the game start screen. If the player’s game has not recently been saved, the player will be warned of losing any unsaved progress. This button
- **Return to Game.** This will return the player to the current game session.
- **Reset Current Challenge.** If the player is near a challenge, this button will reset the challenge and place the player in a default position in front of the challenge. This button is intended for core players who want to quickly attempt multiple solutions. If the player is not near a challenge, this button will be grayed out.
- **Jump to Secret Hideout.** If the player is anywhere in the train station, they can use this button to teleport to the secret hideout. If the player is not in the train station, this button will be grayed out.

Primary Game play Tab

The primary game play tab is the default tab display when the pause menu is opened. This tab will only display information for the current location/adventure. It will feature the following information:

- **Primary Objectives.** The primary objectives for the current adventure will be displayed along with images of the primary matched stacking set.
- **Primary Challenges.** Any primary challenges and solutions for those challenges that the player has found will be displayed here.
- **Primary Matched Stacking Set.** This will look identical to the HUD matched stacking set display, which shows the name of the matched set and how many dolls from that set that the player has stacked.

Secondary Game play Tab

The secondary game play tab lists the status of the optional game play for the current location/adventure. It will feature the following information:

- **Secondary Challenges.** Any secondary challenges and solutions for those challenges that the player has found will be displayed here.
- **Secondary Matched Stacking Sets.** This will look identical to the HUD matched stacking set display, which shows the name of the matched set and how many dolls from that set that the player has stacked.
- **Unique Dolls.** This element will display how many unique dolls that the player has found and from the current location. It will also display how many total unique dolls are in this location.
- **Score.** The player's current score will be shown here.

Options Tab

The options tab provides a standard set of in-game options that most games feature:

- **Controls.** Selecting this button will display the control layout. There is also an option to invert the Y axis of the controller here.
- **Brightness.** The screen brightness can be adjusted with a slider.
- **Volume.** The music and sfx volumes can be adjusted independently with sliders.

Stats Tab

The stats tab provides statistical information on the player's progress and achievements over the entire game. Some of the key information that will be displayed includes:

- Number of Primary Challenges Found.
- Number of Primary Solutions Found.
- Number of Secondary Challenges Found.
- Number of Secondary Solutions Found.
- Number of Primary Matched Stacking Sets Stacked.
- Number of Secondary Matched Stacking Sets Stacked.

- Number of Unique Dolls Stacked.
- Total Number of Dolls Stacked.
- Number of Secret Hideout Rewards Unlocked.
- Number of Concept Art Rewards Unlocked.
- Percentage of Total Secondary Game Play Completed.
- Number of Family Members Rescued.
- Number of Primary Adventures Completed.
- Number of Return Visits Made.

Loading Screens

Stacking will feature the minimum amount of loading screens possible. Loading screens will be primarily limited to starting a new game and traveling from the train station to world locations. As with all of our interface elements, this will be rendered in 2D, using Scaleform (Flash).

Generic

A generic loading screen will be used when needed for non-level specific loads.

Level Specific

When the player boards a train to a world location, an animated loading screen featuring a stylized train traveling across the screen to the world location will be displayed. If possible, some key elements of that particular location will be seen scrolling by in the background.

Adventure Start Overlay

When the player arrives at a location, an overlay will display on the screen for a few seconds. This overlay gives the player a quick summary of how the player's achievements in that location. It is yet another way that the player will be tempted to pursue secondary game play.

If this is the first time a player is playing a particular location/adventure, only the title of the level will be shown. All of the other information is only displayed on **return visits** to that location.

The overlay displays the following information:

- **Title of Level:** *The Gilded Steam Ship*
- **Unique dolls:** *Unique Dolls Stacked 5 / 13*
- **Challenges Found:** 4 / 5 (includes both primary and secondary challenges)
- **Challenge Solutions Found:** 6 / 30 (includes both primary and secondary challenge solutions)

- **Matched Stacking Sets Found:** 1 / 2 (includes both primary and secondary matched stacking sets)

Camera

Stacking's primary game play camera is a “third person chase” style camera. This camera has been designed to require as little manual correction on the part of the player as possible while still providing core players the freedom to manually adjust the camera. This will be achieved by careful tuning of the camera as well as building environments that offer ample room for the camera to rotate. *Stacking* also features a stationary “pole camera” for use in smaller spaces.

Third person chase camera

The third person chase camera follows behind the player and will rotate and ease its way to try and remain behind the player as best as it can. This camera is an adaptation of the third person camera used in *Brütal Legend*. The chase camera's parameters are modified in the following situations:

Doll Size Changes. Each doll size has its own camera settings. As the player's doll size increases, the player's camera becomes more elevated with a wider Field of View. This helps prevent the larger doll from obscuring the player's view, but also gives the player the sense of progressing to a larger, more powerful doll.

Talk Camera. When a player talks to another doll, the camera will change to try and frame the conversation as best as possible. This is necessary because dolls of dramatically different heights can talk to one another.

Volume Overrides. A volume can be defined in the world that will override any of the camera settings when the player enters the volume. This is typically done to help tweak the camera settings to better work in a more confined space.

“Pole Camera”

A “pole camera” is a camera that remains stationary, but uses a combination of rotation (pitch and yaw), depth of field, and field of view to track the player as they move across the screen. These cameras are typically used in smaller spaces where a chase camera might be confusing. Pole cameras have the following attributes:

Player Focused. The pole camera will always keep the player framed in a set position on screen. Each pole camera can define offsets from the center point of the screen as needed.

Depth of Field. The depth of field effect will dynamically adjust to ensure that the player is always crisp, regardless of the distance they are from the pole camera. This means that some of the space in front of and behind the player will blur. This is very effective at creating a sense of miniature.

Dynamic Field of View. The pole camera's FOV will dynamically adjust as the player moves closer to or farther away from the camera in order to keep the player

the same size on screen. This works very well, and makes it much easier to navigate spaces when the camera doesn't adjust its actual position.

Audio

Since the game has no spoken dialog, there will be a lot of focus on creating a compelling and unique sound design. The audio will combine the idea of "analog" physical sounds with musical notes and instrument sounds to create a compelling sonic experience.

Special attention will be paid to doll abilities by designing specific audio for each unique ability. This will help make the discovery and use of abilities satisfying to the player.

Music

The music in *Stacking* will have a vintage sensibility without being specifically tied to only one period of music. This vintage sensibility should be paired with a sense of charm and exploration that mirrors the game's comic aesthetic and focus on adventure.

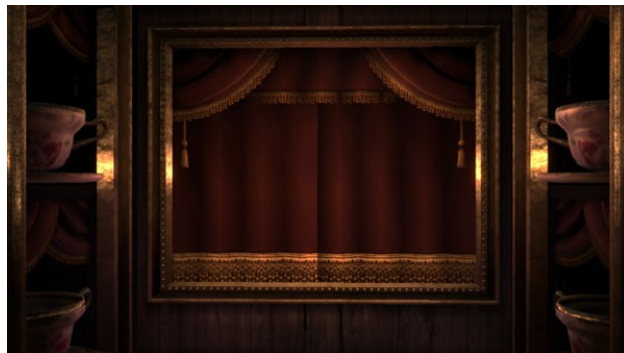
Each of the game's locations will feature unique music loops. This will equal about 2 minutes per location, for a total of eight minutes. This will provide enough content for the loops to be cut up and combined with different ambiances for distinct areas within a level while not feeling repetitive to the player.

In addition, each of the game's cinematics will need to be supported with silent-film style piano music. This will result in an additional twenty minutes of cinematic music.

Ideally, this music would be custom scored. Having custom music for *Stacking* would go a long way to helping carve out a distinct identity for a new IP.

Cinematics

Cinematics in *Stacking* will be delivered in the style of a silent film movie that takes place on a miniature stage set. There is no spoken dialog, but instead lines appear on the screen in the form of silent movie dialog cards. The entire cinematic will be scored with piano music.



Stacking will feature approximately twenty minutes of cinematics.

Primary Story Cinematics

Each adventure will feature an “intro” and “outro” cinematic. In addition, the game itself will have an intro and outro, which will provide the back story and final resolution to the game experience. Additional short cinematics may be added as required to help progress a challenge or adventure.

Reward Cinematics

The player receives reward cinematics for finding and stacking together secondary matched stacking sets of dolls. There will be at least one secondary matched stacking set per location, resulting in a total of 5 reward cinematics.

Cinematic List

Adventure	Cinematics
New Game	<i>The Disappearing Blackmore Family</i> (game intro)
Train Station	<i>Coalition of the Unwilling</i> (intro), <i>Spice of Life</i> (outro), <i>The Akzidentale Tourists</i> (Reward)
The Gilded Steam Ship	<i>The Never Ending Cruise</i> (intro), <i>Back at Dock</i> (outro), <i>Lord of Confusion</i> (reward)
The Zeppelin of Consequence	<i>Stop the Sabotage</i> (intro), <i>Zeppelin Grounded</i> (outro), <i>Ah! The Humanity!</i> (reward)
The Triple-Decker Tank Engine	<i>Stop the Train</i> (intro), <i>Presenting: The Baron Matroyshka</i> (outro), <i>The Gooseberry Crumble</i> (reward)
Primary Game Complete	<i>The Baron Defeated!</i> (game outro)

Art Direction

Overview



The look of *Stacking* is constructed around the central game play component – Russian-style stacking dolls, or *Matroyshka*. Much of the art direction is an elaboration on what type of world these dolls might live in; what thematic and stylistic patterns would be associated with a parallel world filled with sentient Russian dolls?

Rather than directly address how these dolls came to be, the look of the game is designed to make their world feel complete, consistent, and, in its own way, *plausible*. Many of the visual influences that have been incorporated into the game give the game visual depth; some of the elements will not be immediately recognizable to all players, but together they help create a distinct style. Matching a new type of game with a new type of look will help craft a memorable and lasting IP.

Below are some of the key ingredients that makeup the art direction of the game:

Victorian Era

The Victorian era provides a rich backdrop to set our game in. Many visual elements from the Victorian Era are familiar to many players – The smoke stacks of the Industrial Revolution, the blackened faces of Chimney Sweeps, and the ubiquitous top hat. *Stacking* takes many of these elements and pushes them to their logical extent, exaggerating them for comic effect and visual interest. An array of smoke-belching smoke stacks power a Zeppelin, Chimney Sweeps become much sought-after freelance consultants, and all sorts of ornaments are dangled off the tops of incredibly large top hats.

The Victorian era is sometimes depicted in “old timey” sepia tones with minimal color; however, the look of *Stacking* is filled with vibrant color. This is done to help create a compelling, high-fidelity world for the players to explore, but also to underscore the idea that *Stacking* is not a “historical” experience. Instead, it is a new world, alive and contemporary, that is influenced by the ideas and look of the Victorian Era.

Diorama

Dioramas, with their unique combination of found-objects sense of miniature scale, are a big influence on the world style of the game. In addition to providing a lot of visual interest and charm to the world, the idea of a diorama world *feels consistent with the type of world that sentient Russian dolls might inhabit*. Fine artists, such as Joseph Cornell and the more contemporary Elizabeth McGrath, have provided a lot of inspiration for many specific diorama and “art box” elements in the game. For example, the signage in the train station is heavily based on the look of a Cornell box.



Silent Film

The visual language of silent film, with its exaggerated, contrasted lighting, pronounced acting style, and scratch-filled dialogue cards is a major visual influence. In addition to inspiring the look of the cinematics and tutorial cards, other elements of silent film have been influenced the world design.

Theater

Elements of theater and stage have been woven throughout the game. The cinematic style, for example, is a fusion of both theater and silent film influences. One of the largest influences of theater on the look of the game is in the area of lighting. Rather than approach the world with “naturalistic” lighting schemes, the world is being lit as if it were on a stage; soft pools of light and heavy color themed lighting fill the interiors of *Stacking*. This approach to lighting also helps reinforce the diorama feel.

Stop Motion Animation

Stop motion animated films are a big influence on the look of *Stacking*. Popular films such as *The Nightmare before Christmas* or *Coraline* are big inspirations, as well as some of the more underground art house films of *The Brothers Quay*. These films combine a sense of diorama, or miniature, with a charm and character that gives their worlds a sense of being self-contained, complete, and believable.

World Style

Multi-tiered Design

Because the dolls themselves exist in discrete sizes, many of the objects in the world play with this idea for visual interest and comic effect. For example, benches are often stacked next to one another, in an array of progressively smaller sizes, each fitted to a specific doll size. Another example is the cocktail table in the Royal Lounge, which is comprised of three different table tops, each at a different height to accommodate a different sized doll.



Diorama Elements

One of the ways that the concept of dioramas is integrated into the world is by including small scale real-world items as part of object designs. It's a common technique in actual dioramas to use "found objects" in a different context. For example, Popsicle sticks could be used as wood flooring. These objects will be integrated so that they don't dominate what the environment is supposed to be. These objects should stand out as a "second read" of the world, offering a bit of visual interest and charm for the perceptive player.

Some examples of objects that could be used in this way include:

- Thimbles;
- Toothpicks;
- Door knobs, hinges, and other cabinet hardware;
- “Dress making” measuring tape; the flexible kind that is yellow and black;
- Children’s building blocks;
- Matchboxes, ink blotters, and other small scale items with vintage graphic design;
- Paper clips;
- Combs and hair brushes;
- Marbles;
- Vintage toys, instruments or ornamentation are good in general.



Miniature Proportions

To further emphasize the idea of miniature or diorama scale, the idea of “miniature proportions” will be integrated into the world style in the following ways:

- **Object simplification.** Many forms will be somewhat simplified, with bulkier and fatter shapes than they otherwise might have. Smaller, diorama-style objects don’t carry as much fine detail as their larger real-world counterparts. A balance will be struck so that objects do not feel uninteresting and low-fidelity.
- **Material Scale.** Environment materials will generally be used at a large scale, with less tiling. By repeating patterns less times, it implies that the rest of the objects in the world are at a smaller scale. This will be done in such a way to insure that the materials remain visually interesting.
- **Depth of Field.** A soft depth of field will be used on the game camera to imply that the world is small scale. The player character will always be in focus so that player navigation and game play is not compromised for this effect.
- **Minimal Transparency.** Although transparency will certain be used in the game, it will be deemphasized in favor of thicker, solid shapes. Thin, tapering, wispy forms do not communicate the smaller scale and “hand-made” quality of a diorama scale world.

Lighting

Lighting is a key component of the world style. The world will embrace a “stage lighting” approach, which means:

- **Indirect Light.** There will be very little hard shadows or direct sunlight in the world. Instead, pools of soft “spotlights” and a heavy emphasis on bounce lighting will be employed.

- **Simple Color Themes.** Instead of making any specific area of the world home to a huge range of colors, any given area of the world will be associated with a vibrant, but simple color scheme. A good example of this is in the train station. The Main Concourse area is washed in gold and brown, giving the area a light, airy feel; however, when the player moves into the adjacent Royal Lounge area, the smaller room is bathed in saturated reds, creating a very different mood and sense of space.



Character Style

The dolls in Stacking should feel like physical, painted objects. Several advanced material features such as rim lighting, environment mapping, gloss mapping, and very high resolution hand-painted diffuse textures are being employed to ensure this.

The dolls should also feel charming, comical, and captivating. Because the dolls have such simple shapes, this is largely going to be achieved through the painting and animation style of the dolls.

Painting Style

The painting style of the dolls has both a hand-painted sensibility as well as a high contrast graphic quality. Both of these elements are needed for the dolls to feel both like physically painted objects and to be visually distinct and identifiable on screen. The painting style has the following qualities:

- **High frequency detail.** The doll textures are being created at a very high resolution so that we can incorporate fine lines, lots of pattern, and other

crisp surface details into their designs. This level of texture detail is necessary to provide enough visual interest and character distinction because their shapes are so simple.

- **Visible brushstrokes.** The doll textures are being painted to have visible brush strokes. This helps reinforce the idea that the dolls are painted objects and to further distinguish them from the environment, which employs more photo-based surfacing.
- **Simple eyes.** The dolls all have simple, stylized eyes of various shapes. This not only helps give them their own style, but also helps avoid the “dead” look. When realistically-rendered eyes are incorporated into the textures, but don’t animate in more naturalistic way, the dolls can look dead or especially creepy instead of comical and charming.
- **Flatness.** The details of a doll’s anatomy, such as the arms, hands and face, are painted in a way to maintain a certain level of “flatness”. This works well with the simple shape of the doll and more closely resembles the approach that is taken on real-world Russian dolls.



Animation Style

Because the characters are simple, solid shapes with no articulated joints, a distinct animation style based on stop-motion animated films was chosen to help infuse personality into the dolls. This style can be defined as:

- **“Stepped” not smooth.** A stop-motion animation style is partially defined by the lack of blending or interpolation between frames of animation. This gives the animation a hand-made quality instead of a computer interpolated quality. Even though smooth animation is not our stylistic goal, some smoothing may be used to soften the impact of jittery or twitchy animation if it becomes distracting.
- **Exaggerated.** With such simple shapes, the animation has to be pretty heavily exaggerated to communicate emotion and character. This approach also harmonizes with our silent film and theater stylistic influences, which are also marked by exaggerated acting.
- **Very limited facial animation.** Instead of relying on a production-intensive level of facial animation, dolls rely on little or no facial animation. Most dolls are given an expression that typifies their character. When needed, dolls can swap out their face texture to change expressions at critical moments. This approach is similar to the limited head-swap method used in some stop-motion animated films.



Hats & Accessories

Some dolls will feature additional hat and accessory models. These models add another layer of character and visual interest. Hats are usually ornamental only, while accessories are often associated with specific abilities. Hats sit on the heads of the dolls, but accessories “float” above the surface of the model in the appropriate place. Hats and accessories can also animate as needed.

Accessory models provide a hint to the player that an accessory wielding doll may have a very useful ability. For example, Jasper, a maintenance man, carries a wrench model, which “floats” next to him. Jasper has a “maintain” ability which can

open a number of different things in the train station, and this ability is used in two of the solutions in the “Enter the Royal Lounge” challenge.

Closing



Estimated Play-through Time

6 hours

Rating

E 10+

This game will contain comic mischief and minimal suggestive themes.

Proposed Release

Fall 2010

Production Milestones

The following milestones summarize key production deliveries.

First Playable (due 3/5/10)

- Royal Train Station – Strike Over Adventure, phase 1
- Adventure Design for the Gilded Steam Ship
- Challenge System: multiple solutions, reset support
- Game State System: support for new dialog, behaviors, outfits
- Save/Load System: checkpoints auto-saved, can be loaded from debug menu
- Abilities System: Multiple responses, Meta-Tag support
- Talk System: Meta-Tag support, multiple dialog HUD elements
- Camera System: camera attribute override volume support, talk camera support
- Baked Lighting System: Turtle integration, instance support
- Hud: stack status display, matched stacking set display, Score
- Pause Menu: Pause function only

Production 1 (due 4/2/10)

- Royal Train Station – Strike Over Adventure, alpha
- Gilded Steam Ship Adventure, phase 1
- Gilded Steam Ship Concepts: locations and dolls
- Adventure Design for the Zeppelin of Consequence
- Doll Size 4 Support
- Challenge System: “All solutions found” state, secondary challenges
- Game State System: support for model/prototype swapping
- Save/Load System: New Adventure/Location loading
- Abilities System: Support for LUA script response
- Talk System: Ai dolls can react/respond with dialog, volume override support
- Camera System: Pole Camera support
- Baked Lighting System: Workflow Improvements
- Secret Hideout System, phase 1
- Secret Hideout Visual Design/Concepts
- Hud: secret hideout alerts, autosave icon, unique doll readout
- Pause Menu: Primary & Secondary tabs
- Memory & Performance Budgets

Production 2 (due 5/7/10)

- Gilded Steam Ship Adventure, alpha
- Doll Size 5 Support
- Challenge System: Support for Critical Challenge & Doppelganger dolls
- Secret Hideout System, alpha

- Camera System: Chase Camera follow improvements
- Navigation System: Support for Path Volumes
- Cinematics: “Film Grain” post effects
- Music: Train Station
- Hint system: button presses to reveal progressively easier hints for current challenge
- Secret Hideout, phase 1
- Save/Load System: Return Visit Support
- Abilities System: Doll Splitting support

Production 3 (REDUCED TEAM MILESTONE) (due 6/4/10)

- Stacking System: Support for stacking “blocking”
- Cinematics: Music Prototype
- Doll Size 6 Support
- Adventure Design for the Zeppelin of Consequence
- Zeppelin of Consequence Concepts: locations and dolls
- Zeppelin of Consequence White Box

Production 4 (due 7/9/10)

- Secret Hideout, alpha
- Navigation System: Support for dolls “pushing”
- Dynamic Object System: destructibility improvement
- Navigation Trail System
- Rendering System: Performance Optimizations (ps3 & 360)
- Adventure Design for the Triple Decker Tank Engine
- Hud: concept art unlocks, board train prompts
- Pause Menu: Stats
- Dynamic Object System: wheeled physics objects support
- Zeppelin of Consequence Adventure, phase 1

Production 5 (due 8/13/10)

- Zeppelin of Consequence Adventure, alpha
- Pause Menu alpha
- Triple Decker Tank Engine, Phase 1
- Music: Zeppelin of Consequence
- Design for Final Challenge
- Front End, phase 1
- Train Station Population System online

Production 6 (due 9/17/10)

- Triple Decker Tank Engine, Alpha

- Final Challenge, phase 1
- Final Challenge Concepts: locations and dolls
- Music: Triple Decker Tank Engine
- Rendering System: Performance Optimizations (ps3 & 360)
- Front End, phase 2
- Royal Train Station – interstitial challenges, phase 1

Alpha (due 10/22/10)

- Final Challenge, alpha
- Royal Train Station – interstitial challenges, alpha
- DLC Design Plan
- Achievements/Trophies
- Leaderboard Support
- Front End, alpha
- Adventure Start Overlay alpha
- Loading Screens, alpha
- Audio, alpha
- Music, alpha
- Game Outro Cinematic alpha
- Game Intro Cinematic alpha
- All adventure cinematics alpha
- All world adventures alpha

Beta (due 11/19/10)

Submission to Microsoft and Sony (due 12/17/10)

Approval from Microsoft and Sony (due 1/28/10)

DLC Content Packs 1 & 2 (due 2/18/10)

Approval from Microsoft and Sony of DLC Content Packs 1 & 2 (due 3/11/10)

Appendix 1: DLC Overview

DLC Pack One: Live and PSN Promotional Items

The first DLC pack for Stacking will consist of several downloadable promotional items for both Xbox Live and PSN.

Xbox Live Avatars

- One Prop. The Blackmore Family stacking set. This will be an animated set of stacking doll props that any avatar can play with. The stacking set will be the Blackmore family – going from Charlie up to William, the Dad.
- One Avatar Tee. A “Stacking Logo” t-shirt, for both male and female avatars.
- Four Hats. Some of the hats from the matched stacking sets will be available, such as the Train Engineer hat or the Hunter Darby hat.

Xbox Live Premium Themes

- 1 Stacking Premium Theme.
 - Four wallpapers, one from each of the major areas: Royal Train Station, Gilded Steam Ship, Zeppelin of Consequence, and the Triple-Decker Tank Engine.
 - Four “friend’s channel sets”, each featuring props and mesh from some of the most memorable challenges in the game.

Xbox Live Gamer Pictures

- “Hero” set. A set of gamer pictures that includes the Blackmore family and other key dolls that helped Charlie along the way.
- “Villains” set. A set of gamer pictures featuring the Baron Matroyshka and his underlings.

PS3 Theme

- The PS3 theme will consist of the same four wall papers from the Xbox Live premium theme plus some custom icons for the XMB.

DLC Pack Two: Knight at the Museum Adventure



Overview

DLC pack two will consist of a completely new adventure. Charlie will travel to a new location via train to help solve a new problem. The player will solve challenges to find and stack together a matched set of dolls that can bring a resolution to the problem at hand. This adventure offers a slight twist from the adventures found in the main game - instead of helping innocent children, Charlie is helping his innocent uncle get rid of ill-behaved boarding school children.

Description

Charlie's uncle Mortimer has recently taken a position as a grounds keeper for the Natural History Museum. Poor Mortimer has been overwhelmed by the responsibility of the job, and is in danger of losing his job.

A field trip from the local boarding school, St. Corsini's, are scheduled to arrive at the museum. The children of St. Corsini's are notoriously ill behaved, and Mortimer

is worried that they will wreck the place. Having heard of Charlie's adventures, Mortimer has sent a carrier pigeon doll to Charlie to ask for help.

Upon arriving at the scene, Charlie finds a frazzled Mortimer. The St. Corsini's children are out of control and breaking things. Mortimer has tried to usher them out of the museum, but to no avail. Only Charlie can help save Mortimer's job by finding and stacking together the matched set of dolls that "make children cry".

The level ends on a raucous high note of mayhem and destruction. The player is finally able to chase the screaming children from the museum by controlling the biggest and coolest doll of all - a Tyrannosaurus Rex.

Key Features

- Cool vintage museum location filled with dinosaur dolls, Neanderthal dolls, and other antiquities interpreted Russian Doll style. The whole level is a satire of ancient history.
- All new dolls with all new abilities.
- Funny "Make Children Cry" matched stacking set: alcoholic clown, angry school marm, creepy homeless guy, and giant T-Rex.
- Four new challenges, each featuring multiple-solutions.