AUTO-GRAB DESIGN PROCESS

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FIRST ITERATION (DIFFICULTY SYSTEM)

Design

Problem: Some players matching our persona (families who own a Nintendo Switch) are not comfortable with the controls of *Royal Vermin*. This problem is especially important since accessibility is the game's second pillar.

Hypothesis: Because of the competitive nature of *Royal Vermin*, players with more video game experience are likely to have an advantage and win more often than less experienced players, which alienates part of our audience.

Objectives

1. Create a system that reduces the gap between players so everyone has a reasonable chance of winning.
2. Design a clear, simple and easy-to-use system.
3. Allow the system to be used throughout the match so players can turn it on or adjust it according to their needs and those of the group.

Brainstorm

Idea 1: Simplified controls

Simplify the controls further to reduce the impact of prior video game experience.

Idea 2: Balloon system

Inspired by *Donkey Kong Country*. Before each round, every player could choose a number of balloons matching their skill level. When a player falls or is knocked off the stage, they could use a balloon to get back into the match.

Idea 3: Difficulty system

Inspired by *Ultimate Chicken Horse*. Before each round, players could individually choose a knockback multiplier from three levels: **1×, 3× or 6×**.

The higher the chosen multiplier, the harder it would be for the player to stay in the game. In return, a win at a higher difficulty level would unlock a more prestigious visual reward, such as a crown that matches the chosen difficulty.

Idea 4: Bonus for the last player

Give a temporary advantage to the last-place player when the leader is close to winning. Several options were considered: a shield doubling their health, an effect that shrinks them, or an item more powerful than the others.

Decision

We chose idea 3, mainly for two reasons.

First, it was relatively simple to prototype: we only had to add a knockback multiplier tied to each difficulty level.

Second, the system naturally created a form of balancing through player choice. Playing in “expert” mode could feel more rewarding than playing in normal mode, which encouraged experienced players to take on extra difficulty themselves.

Prototyping

Prototype list:

Assets

- Creation of a simple visual element in the menu for each player to select their difficulty level.

Programming

- Creation of three difficulty levels.
- Knockback adjusted according to the player’s choice.
- Navigation added to the new menu section.
- Link between the choice made in the menu and the multiplier applied in game

Playtest

Procedure: We first had players play a match without explaining the new feature. During the second match, we introduced the system to the players without requiring them to use it.

The test was notably carried out in the indie area of Comiccon, which let us observe our persona in a fairly natural setting, although the sample remains small and potentially biased.

Success criteria

- **Clarity:** at least 70% of players discover the mechanic on their own.
- **Balance:** in at least 70% of matches, the gap between the winning and losing player shrinks.
- **Enjoyment:** rate the player experience on a scale of 1 to 10 to determine whether the mechanic improves the experience of weaker players.

Observations

Observation 1: The mechanic is not visible enough

Only **20% of players** discovered the feature on their own.

We believe this is mainly due to the nature of *Royal Vermin*. Players spend relatively little time in menus and, once a match is underway, nobody wants to interrupt the action to check the options.

So the system was fairly clear once explained, but players rarely discovered it on their own.

Observation 2: The system works best when the gap is large

In **35% of matches**, the gap between the first and last player shrank.

However, we observed something more interesting than the result we were originally looking for: the mechanic was especially effective when matches became lopsided.

When a player had a five- or six-point lead, the other players usually agreed to raise the difficulty level of the winning player. This immediately made the match more interesting and more intense.

In several cases, the leader eventually lost their position, allowing the last-place player to catch up with the others in the standings. Even so, the player who had accepted the higher difficulty also seemed to enjoy the situation, since they could challenge themselves and show off their skills.

So the system did not only balance players: it also **made lopsided matches more interesting**.

Observation 3: The accessibility problem remains

Despite a better chance of winning, enjoyment for weaker players did not increase in **75% of cases**.

So I asked these players why their experience had not improved. The most common answer was that, even though they felt less far behind the other players, they still struggled to use the controls.

So the problem was not only about their chances of winning. **The difficulty of performing certain actions was still an obstacle to their enjoyment.**

Results and lessons learned

This first iteration helped balance some matches better, especially when the gap between players became very large.

However, it did not really solve the original problem:

> **“Some players in our persona are not comfortable with the controls of *Royal Vermin*.”**

Instead, I discovered and solved a secondary problem:

> **“Some matches become less interesting because of the experience gap between players.”**

This distinction was important for the rest of my process. The difficulty system addressed a balance problem, but not directly the accessibility problem with the controls.

So I had to go back to my original hypothesis and find out **which part of the controls was really the obstacle for less experienced players.**

SECOND ITERATION (AUTO-GRAB)

Design

Problem: Some players matching our persona (families who own a Nintendo Switch) are not comfortable with the controls of *Royal Vermin*. Since accessibility is one of the game’s pillars, it was important to understand exactly what made the controls difficult.

Hypothesis: During the first playtests, I noticed that the players struggling the most with the game often used the dash to knock out their opponents rather than the items.
This observation led me to think that the grab-and-throw system was one of the main obstacles for less experienced players.

The action notably required holding a back trigger while moving and jumping, which could be a significant challenge for players with less dexterity on a controller.

By simplifying the interaction with items, we could make *Royal Vermin* significantly more accessible without completely removing the grab-and-throw mechanic.

Objectives

1. Simplify the controls for players with less dexterity on a controller.
2. Create a clear, simple and easy-to-use feature.
3. Allow the feature to be turned on at any time so each player can choose their level of assistance.

Brainstorm

Idea 1: Aim assist

Add assistance that helps players who have more trouble grabbing and throwing items to aim their actions better.

Idea 2: Auto-grab

Let players automatically grab items near them. The player would then only have to handle the throw.

Idea 3: Control schemes

Offer several control schemes so each player can choose the one that best suits their preferences and abilities.

Decision

We chose idea 2.

This solution directly addressed the observed problem: several players seemed to struggle to hold a back trigger while moving and jumping.

Auto-grab removed one step of the process without completely removing the throwing mechanic, which kept the game's identity while reducing the difficulty of execution.

Prototyping

Prototype list:

Assets

- Creation of a simple visual element in the menu for each player to select their difficulty level.

Programming

- Creation of three difficulty levels.
- Knockback adjusted according to the player's choice.
- Navigation added to the new menu section.
- Link between the choice made in the menu and the multiplier applied in game.

Playtesting

Procedure: We first had players play a match without explaining the feature. During the second match, we introduced auto-grab to the players without requiring them to use it.

This time, we mainly tested the feature with several families we know, to get closer to our target persona.

Success criteria

- **Comfort:** at least 70% of players say they feel more comfortable with auto-grab.
- **Balance:** in at least 70% of matches, the gap between the winning and losing player shrinks.

- **Enjoyment:** rate the player experience on a scale of 1 to 10 to determine whether auto-grab improves the experience of weaker players.

Observation 1: An immediate improvement in comfort

Even though our sample was small, **100% of the players tested said auto-grab helped them play.**

The difference was also visible during matches. In several groups, one or two people were consistently behind in the standings during the first match.

Once auto-grab was turned on, these players were better able to interact with items and take a real part in the match.

Observation 2: Matches become more competitive

We observed a significant difference in match results.

Players who previously had very little chance of winning managed to win rounds after turning on auto-grab.

The gap between players therefore seemed less tied to their ability to handle items, allowing the whole group to take a more active part in the competition.

Observation 3: A very positive reception

90% of players said they enjoyed the addition of auto-grab.

The remaining 10% were mainly due to visual issues caused by the very early state of the prototype rather than how the mechanic itself worked.

Results

This second iteration addressed the original problem much better.

Auto-grab reduced a difficulty directly tied to the controls and gave less experienced players a new way to interact with items.

Unlike the difficulty system from the first iteration, this solution tackled the root cause of the observed problem rather than its consequences.

This iteration also confirmed how important observation is during playtests. The first system had taught me that **giving players more chances to win was not enough to improve the experience of someone who struggles with the controls**.

The second prototype let me target that difficulty directly.

Final Version

Following the playtests, auto-grab was integrated into the final version of *Royal Vermin* as a magnet held by the character.

Art direction and UX

- **Design:** creation of the magnet logo in the menu.
- **Design:** the magnet shown in the player’s hand when auto-grab is on.
- **Animation:** the magnet animates when turned on in the menu, with a slight movement and a scale-up.
- **VFX:** a magnetization effect added to the magnet held by the player to show visually that the assistance is active.
- **Sound:** a rising metallic cartoon sound when auto-grab is turned on.
- **Sound:** a falling metallic cartoon sound when it is turned off.

This feature became an accessibility solution that lets players who struggle more with the controls enjoy *Royal Vermin* while still letting other players use the traditional controls.