

Clirty

Clean or Dirty

Game Design Document

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1. Formal game proposal

1.1. Game Description

The game is designed as a multiplayer game with two parties. One party's objective is to cause as much mayhem as possible. They scatter paint and dirt and ravage the environment.

The other team needs to clean up after them. They sweep, mop and repair to restore order. To make their efforts less futile and get a break from running after the litterbugs, they may attempt to catch and restrain them.

The game works in a round based fashion with rounds of a fixed length. This makes the game more easy to pace and keeps engagement and variety high. If the teams turn out to be unfair, it is not a big problem, as players can just try again after a couple of minutes. When the countdown ends, a metric decides whether the map is overall more dirty or clean and which team is awarded the win accordingly.

1.2. Technical Achievement

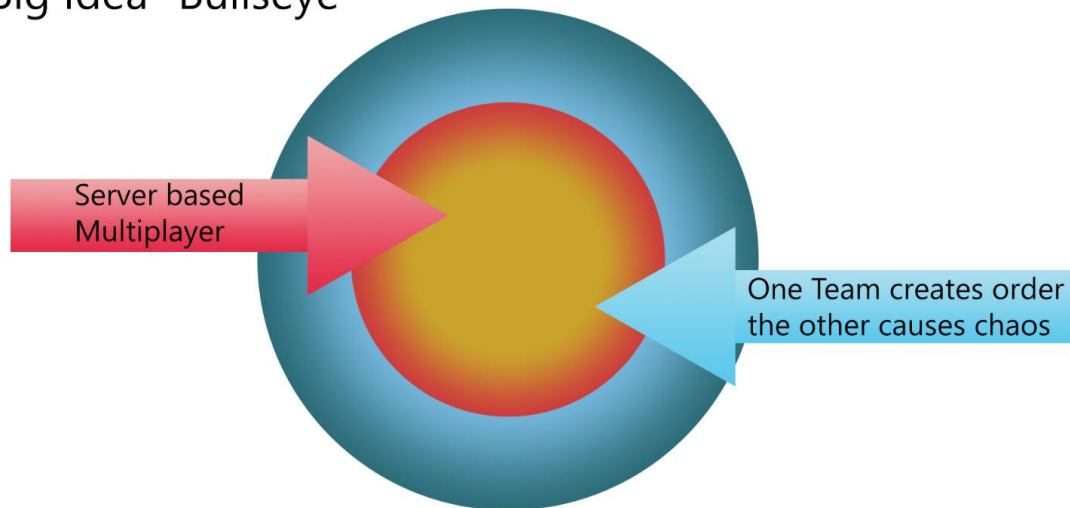
Due to the Coronavirus pandemic, we do not expect players to be able to meet up to play with each other. Because of that, the goal is to set up an online server to enable online multiplayer. Additionally, we would like to personalize the visuals of our game using custom shaders.

1.3. “Big Idea” Bullseye

Due to the game being an asymmetrical multiplayer, the main focus is going to be balancing the mechanics in between the different teams. It has to be fun for all players even though their abilities and objectives are different.

Accordingly, all technical aspects have to be conducive to a smooth multiplayer experience. Wait times need to be short, there must not be lag and the graphics need to be captivating.

„Big Idea“ Bullseye



1.4. Development Schedule

Functional minimum:

- Local Multiplayer
- One Squared sample Map
- Ability to create dirt
- Ability to clean up dirt
- Timer

Low Target:

- One Map with fixed props placed on it
- Ability to destroy props
- Ability to repair props
- Simple Assets

Desirable Target:

- Assets for the players and the props
- Simple sound effects
- Item Pickups
- More abilities for dirt creation and cleanup
- Ability to capture other players

High Target:

- Procedural object placement on the map
- Big objectives

Extras:

Character classes

Soundtrack

Milestone: Game Idea Pitch (19.04.2021)

Names Shortened as follows:

Albert Zach => Albert

Sahin Er => Sahin

Daniel Ziese => Daniel

Matthias Hainz => Mattel

Task Name	Who	Time (in Hours)
Brainstorming	Everyone	2
Documentation start	Everyone	3

Milestone: Formal proposal & prototype (03.05.2020)

Task Name:	Who	Time (in Hours)
Defining the Prototype	Everyone	2
Creation of the Prototype	Everyone	4
Documentation & Presentation	Everyone	5

Milestone: Interim Results (17.05.2021)

Task Name:	Who	Time (in Hours)
Implementation of Player Abilities	Sahin	5
Creation of Menu	Albert	5
Creation of UI	Mattel	2
Map Layout	Daniel	2
Documentation & Presentation	Everyone	5

Milestone: Alpha Release (07.06.2021)

Task Name:	Who	Time (in Hours)
Creation of Assets	Albert	10
Implementation of new abilities	Daniel	2
QA & Balancing	Mattel	4
Map Design	Sahin	1
Documentation & Presentation	Everyone	2

Milestone: Playtesting results (28.06.2021)

Task Name:	Who	Time (in Hours)
Testing and evaluation	Everyone	10
Adjusting the game mechanics based on feedback	Everyone	X
Bug fixing	Everyone	4
Implement Feedback	Everyone	8
Documentation & Presentation	Everyone	2

Milestone: Final release (24.02.2021)

Task Name:	Who	Time (in Hours)
Item Pickups & usage	Albert	2
Abilities	Daniel	4
Balancing	Mattel	2
Simple Soundeffects	Sahin	2
Bug fixing	Mattel	3
Documentation & Presentation	Everyone	2

1.5. Assessment

Tell us what the main strength of the game will be.

The replayability of the game due to its fast-paced PVP nature.

What part is going to be the most cool?

Cooperating with your teammates in order to trick your opponents and take the win.

Who might want to play this game?

Clirty is a bit of a party game by nature. It should appeal to players looking for an engaging evening with their family and friends. It is not meant for players investing hours upon hours honing their skills.

What do they do in the game?

Outplay their friends by ruining their progress in the round in order to win.

What virtual world should the system simulate?

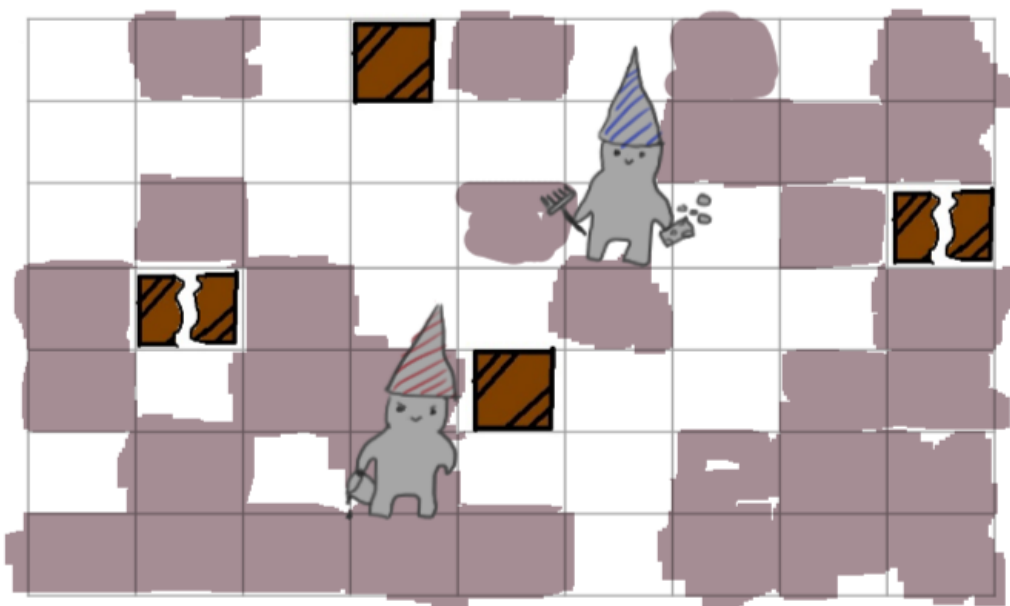
A world of chaos and order where the goal of one team is to annihilate the enemy - but on a small scale.

What criteria should be used to judge whether your design is a success or not?

If players want to play just one more round. Ideally, at the end of each round, the losers want a rematch and the winners want to extend their dominance.

2. Prototype

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2.1. Development

Our game is ultimately supposed to run in real time but that isn't really feasible even with multiple people keeping the pieces moving. Because of that, we decided early in prototype development to discretize the game to make it more suited for emulation by hand. We decided on a grid for the level and a turn based time system to make interactions easier to process.

2.2. Gameplay

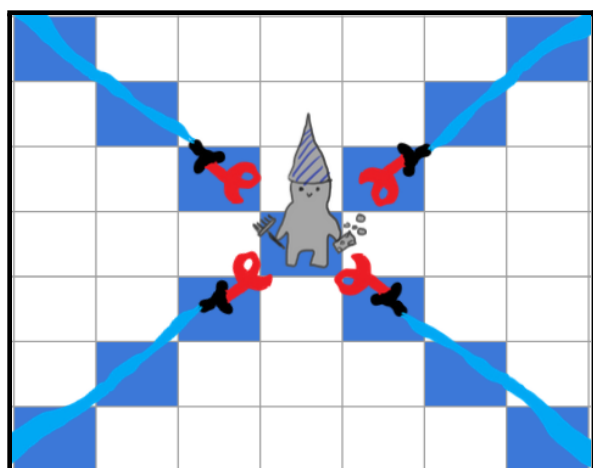
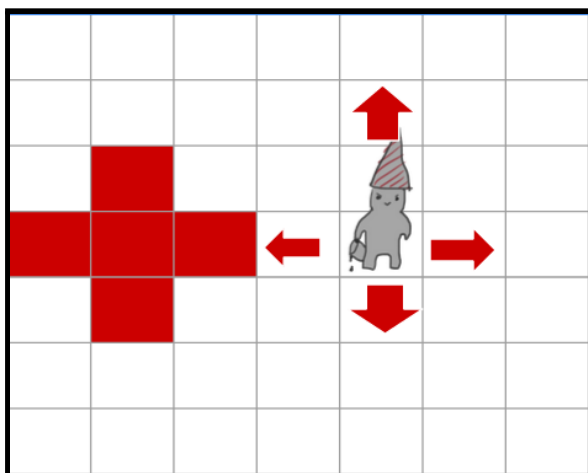
2.2.1. Setup

The game requires a finite grid as the playing field and three kinds of game pieces for the different teams and the props. Cells in the grid start as clean. They can be dirtied if clean and cleaned if dirty. In the beginning the props are distributed randomly across the cells and then half of the remaining cells are randomly dirtied. The members of the teams are placed anywhere in the 3 outer columns of their side. Team Clean on the left and team Dirty on the right.



2.2.2. Skills

In the prototype, we've decided to add the most basic actions to the game. These include walking, creating dirt, cleaning dirt, one skill for each side as well as repairing and destroying objects. Walking onto fields immediately changes them. I.e. that the dirt team creates dirt while walking and the cleaning team cleans.

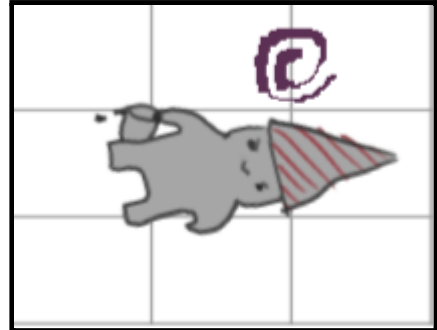


For skills we have the dirt grenade for the dirt team and the water hose for the cleaning team.

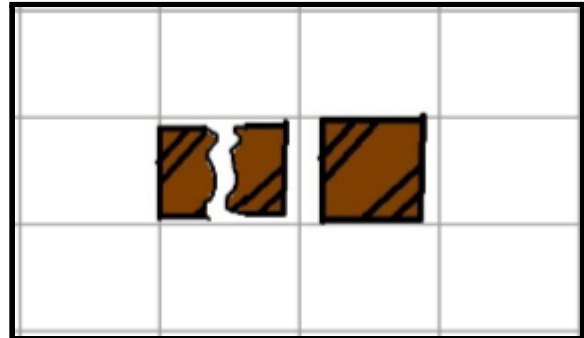
The dirt grenade can be thrown in horizontal or vertical direction to make a plus sign shape dirty and also applies dirt to members of the cleaning team which are caught by the impact.

The water hose cleans a diagonal row from dirt and can also hit members of the dirt team.

When a player gets hit by an opposing skill, they are either stunned for one turn or rescued by a member of their own team, which removes the stun effect.



The dirt team also has the ability to destroy props when standing in front of them. Fixing destroyed props is done by the cleaning team and also requires standing in front of it. It was planned that fixing props requires playing a mini game, but we neglected this idea for the prototype as all minigames we came up with were not applicable to a board game.



2.2.3. Turn Order

The game is played in turns, which are composed of two actions. Actions are: Moving one field horizontally or vertically, using the skill or destroying/fixing a prop. Both players plan and lock their next turn simultaneously. The dirt team starts executing its turn. Then the cleaning team executes their turn.

2.2.4. Game End

The game ends after a fixed number of turns which is set at the beginning of the game. After both players have finished their last turn, the number of clean and dirty fields are counted and compared. Props are counted as five points. Destroyed ones are counted for Team Dirty and repaired ones for Team Clean. The team with the higher score wins.

2.3. What we learned from playing the prototype

Early on we noticed that we need more interactions between the players. That is why we introduced the stun effect when using items. Ideally, there should be more ways of combating or slowing down the enemy team so the game does not devolve to cleaners running after dirt makers removing the dirt they just placed. It also adds tactical considerations to moves if it's more valuable to change terrain or stun an enemy.

Secondly, we learned that the map has to start in a state corresponding to a balanced score, i.e. half clean, half dirty. That way, if both teams are generally equally powerful, the game should be fair. If the map started clean, the dirt making team would need other advantages and then the length of one round would become a balancing consideration. This would probably make properly balancing the game impossible.

Lastly, we realized how important enjoyable graphics and animations are for a party game like this. We experimented with this by adding little scribbles to the prototype and moving the characters in creative ways. When every action a player takes looks funny there is a base layer of entertainment even if the gameplay itself is not perfectly balanced or engaging.