Milestone Report 4

Alpha Release of a Twitch-based Puzzle-Action-Game

1 Progress Overview of Alpha State

This section is a small recapitulation of the achieved features as outlined in the Game Pitch from Milestone Report 1 for the desirable target as it was defined at the beginning of the semester. Summing up the current alpha state:

Firstly, the game contains a User Interfaces with a Main Menu to adjust game settings and change the current user account of the Twitch Interconnection. A small Tutorial Popup was also added to simplify the introduction for new players. Menus were listed in the desired target and are now fully included.

Secondly, the game contains all required assets like models for conveyor-belt-tiles, food spawn points and ingredients which are used to cook a recipe. The majority of these models is shaded using the Cel-Shader introduced in the previous milestone. Graphically, it can be said that, with the inclusion of additional small effects like e.g. smoke particles for cooking pots and a boiling effect, the general look of the game is fully fleshed out.

Thirdly, at the moment there are 5 ingredient types with only a single cooking method and spawn points as the only special tile included in the game. Base tiles are either curves or straight tracks. Even though there already is an implementation for more special tiles it is a bit unfortunate that there are not more exciting board tiles to show during Alpha Release. Considering the 2 to 3 cooking methods: This turned out not so important, since the gameplay only would majorly change with the inclusion of new board tiles. So for now, cooking pots should suffice for finishing recipes.

Lastly, basic sounds and music are also included as stated in the desired target. A high score is not yet included.

2 Implemented Features

2.1 Main Menu, UI, Instructions

The Game includes multiple user interfaces required from our point of view for Alpha Release: These include a simple Main Menu (see Figure 2) with Options and Twitch-Settings, a Pause Menu and a small Tutorial Popup (see Figure 3) explaining the game's controls at the beginning. Additionally, a Game Over Screen is shown at the end of a session stating the scored points by the player. These are all fully functional.

2.2 Recipe Sheet

Considering the critics from a fellow peer during the previous milestone meeting the UI listing current recipes/food orders has been optically reworked. Now, each of the three
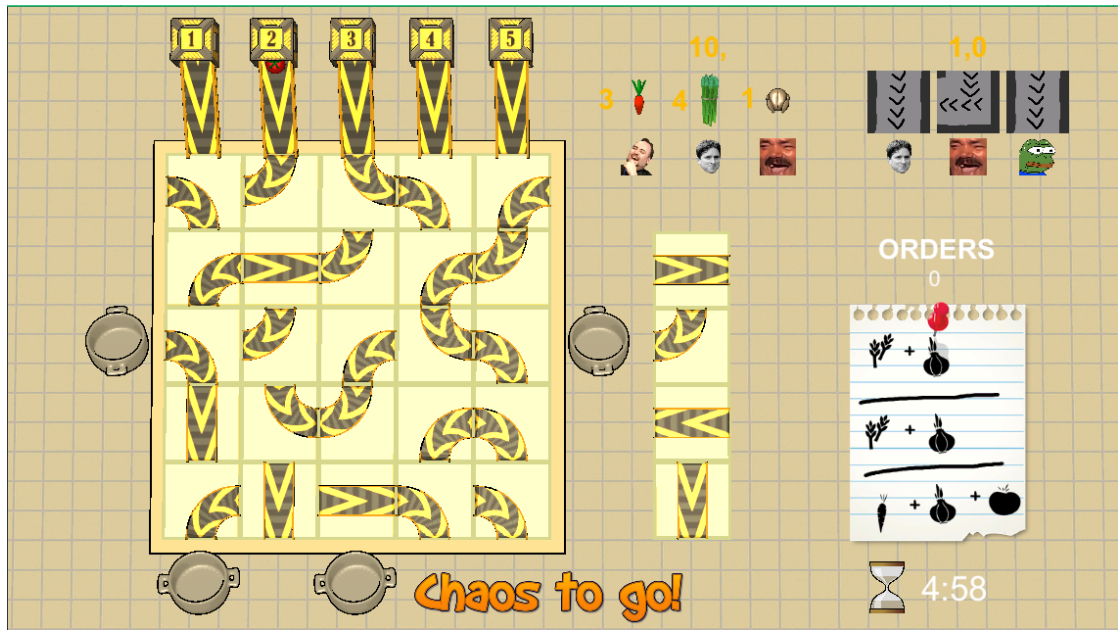
Figure 1: 'Chaos to Go!' with conveyor-belt-board on the left, UI for food orders, score and game time on the right and Twitch poll UI at the top

Figure 2: Title Screen for 'Chaos to Go!'. Very basic button layout.

Figure 3: A tutorial popup at the beginning explaining the controls (In German for Play-testing Purposes)

Figure 4: Current ordered recipes represented as a stylized shopping list

(a) Straight Tile

(b) Curved Tile

(c) Spawn Tile

Figure 5: Different animated assets for conveyor belts

recipes is shown strictly separated and horizontally listed as a sum of ingredients. Recipes can be defined in the Game Manager and are randomly selected (see Figure 4).

2.3 Animated Conveyor Belt Tiles

Basic, placeholder tiles with arrows indicating movement direction were replaced with final animated assets depicting conveyor belts. Movement visualization is achieved with proper UV mapping of the tiles, especially the curved ones, and texture scrolling. As we finally decided to spawn new ingredients on the border additional spawning tiles were created. These consist of a straight conveyor belt and an enumerated spawning box. Like in case of other assets the tiles are visualized with use of custom cell shader to achieve consistent look. In order to keep visuals clear, even with more complex shapes of tiles a highlight on hover was added to inform the player, where the dragged tile will be dropped.

2.4 Music and Sound

Background Music and sound effects were added on top to improve the player experience. The music choices were based on the idea of representing the atmosphere in a restaurant.

Figure 6: Audio Settings

The volume of both music and sound can be adjusted in the main menu settings. (See Figure 6)

2.5 Win Condition

The Win Condition is relatively simple: The player has to complete as many orders as possible within a set time interval in order to achieve a good score. Wasting ingredients causes a small penalty. Please remember that it is not okay to throw away food that is still good! Once the timer shown on the bottom right (see Figure 1) hits zero, the Game will stop and the player is shown the achieved score and asked to either return to title screen or restart another session.

2.6 Additional visual effects

Also considered as desirable are various small visual additions which render the game more playable. These include an effect for boiling soup, particles when ingredients are added to a pot or destroyed by crushing with new conveyor-belt tiles or when falling off the board and finally score labels spawned at destroyed ingredients or pots with completed recipes. Figure 5 gives a small overview of these additions.

3 Design Revisions

Various design revisions were made over the course of the previous three weeks:

3.1 Increased board size from 4x4 to 5x5

This change was made because a game board containing only 16 tiles was too easily manageable. Thus the size was increased to 5x5 and an additional sixth fixed row at the top was added for spawn points.

Figure 7: Left: Effect for filled pot with particles, right: Destroyed Chicken with penalty indicator (minus 20 points)

3.2 Changes to spawning

We removed all upwards facing tiles from the tile spawning pool, since there is no scenario in which the player would like to use such a tile. We improved the algorithm for ingredient spawning, so that there is a bias towards ingredients that are currently needed in the recipes. This makes the game experience feel more balanced especially if there is no twitch chat.

3.3 Tiles can be swapped with neighbors on the conveyor-belt-board

Often the player would run out of new board tiles. We decided to open new options by providing the possibility to swap tiles on the board as long as there are no ingredients on them. This has the side effect of decreasing the power of the Twitch-Chat. However, often the player is looking for a special tile anyways and the viewers still have the ability to decide, which new tiles to vote for. Additionally, the spawn selection of ingredients on the board is also done by the Twitch-Chat, thus giving enough possibility for interaction providing a lot of non-deterministic behavior nonetheless.

3.4 Increased amount of Cooking Pots from two to four

Reasoning behind such number of pots is quite simple: There are three different recipes and thus it is possible to work on all of them at the same time. Also, a fourth pot was added for some strategic micro-management, e.g. for storing spawned ingredients that are not yet needed and may become important later.

3.5 Cooking Pots do not empty automatically anymore

If a cooking pot is full, it needs to be emptied by clicking on it. The player either receives credit for a finished recipe or a penalty based on the amount of wasted ingredients. The idea behind this is to give the player the option to abort a current or wrong recipe to go for another receiving a small penalty.
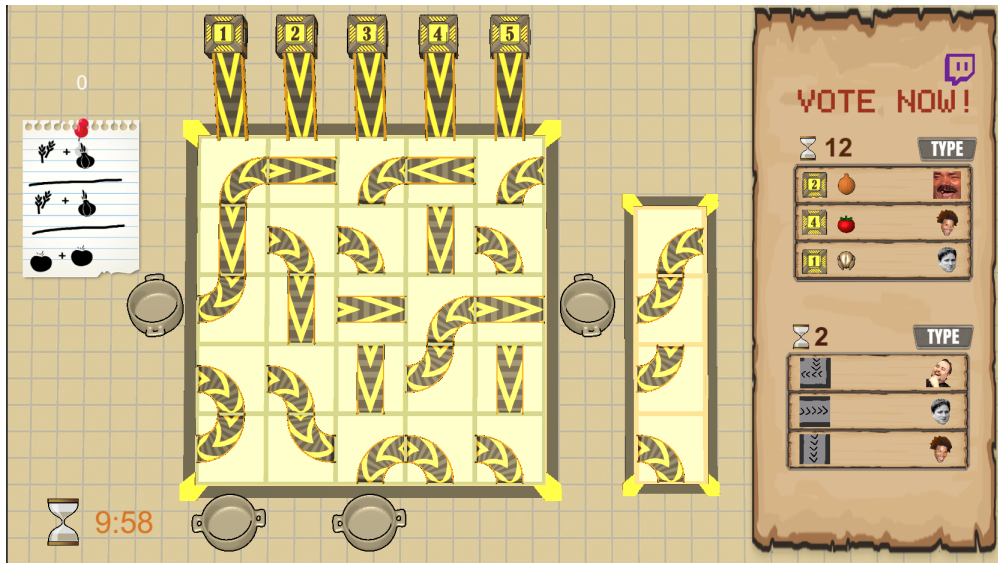
Figure 8: UI Design after Revision

3.6 UI Revision

To make the GUI more clear for player and Twitch viewer, the UI elements are newly arranged such that twitch related elements are located on the right side and player relevant elements on the left side of the screen. (See 8) This helps both parties to focus on their part.

3.7 Poll visualization

To make voting feel more impactful and giving the player as well as the viewers a better overview what is happening in game we added a visualization for the current poll vote standings.