

# Milestone Report 6

## Final Release of a Twitch-based Puzzle-Action-Game

### 1 Final Release - Summary

During the recent semester, our team was developing a Puzzle-Action-Game utilizing the Twitch streaming platform to include viewers into the gameplay while a streamer is playing for points. At the same time and for testing purposes, it is also possible to play the game without the streaming platform in a traditional single-player setting. This section is meant to give a small summary about all finished game features and improvements from Alpha Release (see Milestone Report 4).

#### 1.1 Overview

'Chaos to Go' is a puzzle game with the inclusion of Twitch as a streaming platform allowing players to directly influence the game-play. The goal is to finish recipes by leading ingredients towards one of four cooking pots on a board full of conveyor-belt-tiles. This is achieved by either swapping tiles on the game-board or by placing new ones which are selected by the viewers of the streaming platform. Viewers can either support the streamer by providing needed tiles or they can sabotage by choosing unlucky spawn positions and ingredients. To balance this, a poll system with choices, the viewers can choose from by typing specific emotes into the chat, was set up.

#### 1.2 More Visual Cues

During playtesting, many testers complained about the fact that some game mechanics, like swapping tiles or clearing recipes via clicking cooking pots, were not conveyed enough. Often, a player did not know that a certain action could be performed. An important addition against this problem are several new visual cues meant to give more feedback about what actions and moves are allowed at a given time. E.g., when an already placed tile on the board is selected, the game now highlights (see Figure 2) with which tiles the selected one can be swapped. This prevents, when a player tries to swap a tile with an occupied one, that a reaction is awaited.

Another problem was the fact that players did not know they also had to click on cooking pots to finish a recipe and receive points for it. While the pots still need to be cleared the same way as before to ensure a player can empty a pot at any given time, pots start to blink in green now when a recipe is complete (see Figure 3).

#### 1.3 Improved Twitch Connection Feedback

During play-testing, there was the issue that the game did not produce enough feedback about whether a connection to the servers is successful. During Milestone 5, a small

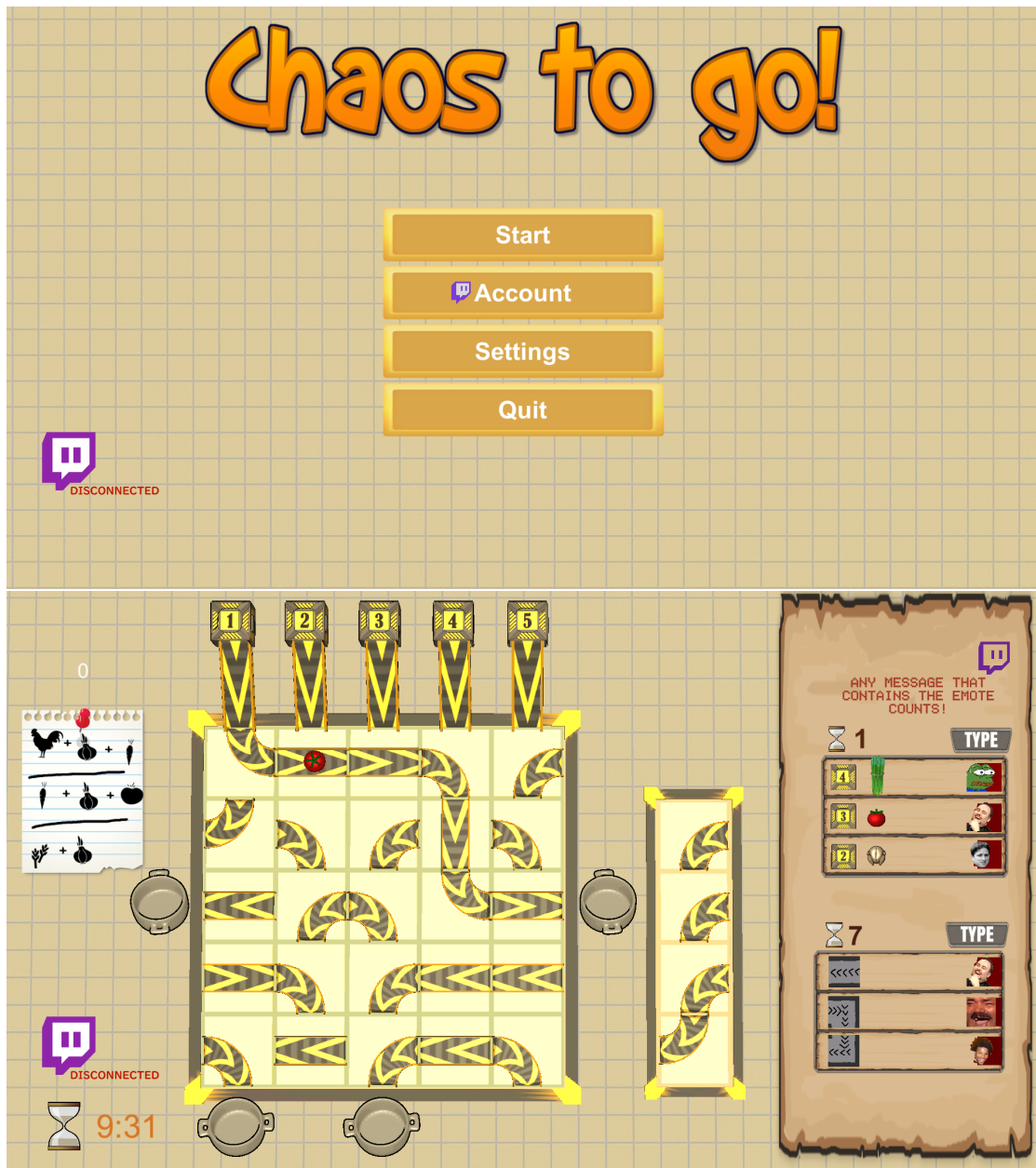


Figure 1: Screenshot of 'Chaos To Go' Main Menu and Main Scene.

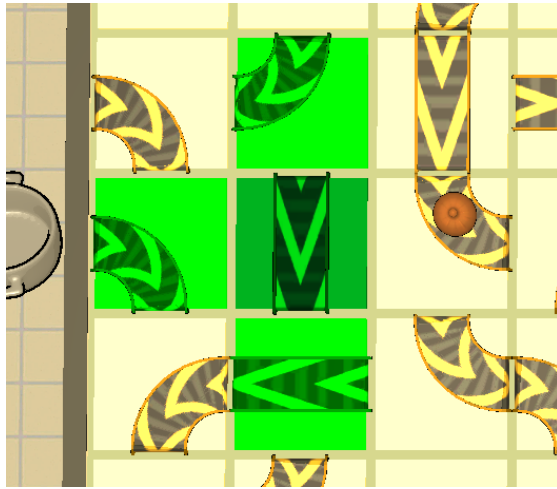


Figure 2: A tile can be swapped with neighboring, non-occupied tiles. This is now highlighted.

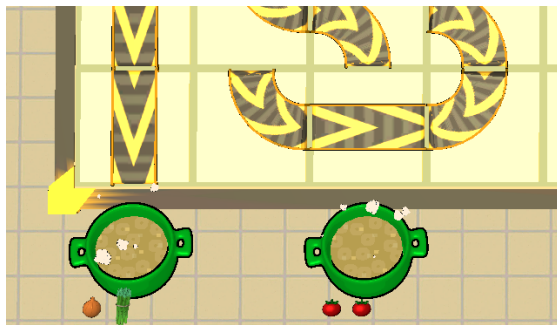


Figure 3: Pots still need to be clicked but blink now when recipe is correct.

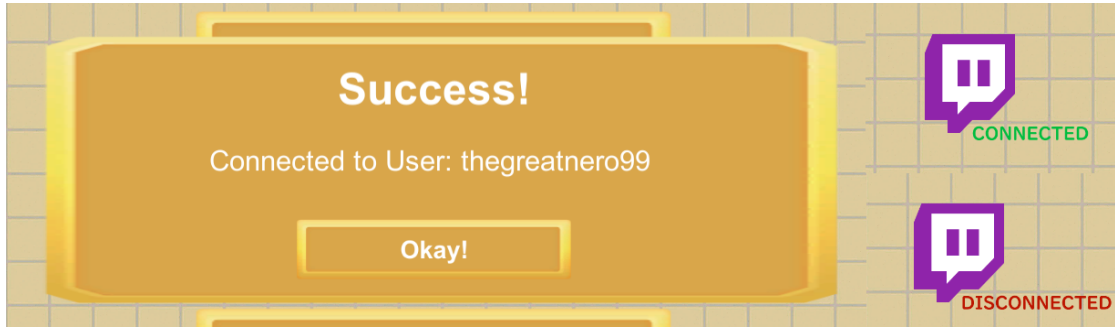


Figure 4: The indicator was improved and now keeps checking the connection.

indicator was added as a result of the play-testing sessions. This feature has been improved for final release and gives direct feedback, when a streamer set up the connection correctly (see Figure 4). An established connection is checked and shown to the player by a newly added icon.

### 1.4 Improved Tutorial for Players

The tutorial was extended with new images and texts (see Figure 5) to help new players understand the various mechanics. Even though the control set is very minimalistic with only left and right click and the escape key for pausing and exiting the game, testers were not content with the explanation of the various actions they could perform with these controls. The game appeared to be very difficult for newcomers. Our hope is that the newly added information will simplify it to a certain extent.

### 1.5 Improved Instructions for Viewers

During testing, we received feedback that viewers often did not understand how they could influence the gameplay and what they were supposed to do. While most of the people who gave feedback were not frequent users of the Twitch platform this is a major problem nonetheless. What makes this particularly difficult to solve is the fact that at any given time a new viewer could join a running stream session. To solve this problem a rotating set of instructions was included into the main scene (see Figure 1 and 5, up-right corner of the gameplay screenshots).

## 2 Development Experience

Considering the design, it can be said that the final release is still very similar to the paper prototype we presented as milestone 2. Almost all aspects about how the game is played, like the score, the timer, the voting system and the way the board is filled with conveyor-belt-tiles as straights and turns is still the same as it was planned during pitch and prototype phases. The only major change is that neighboring tiles are swappable

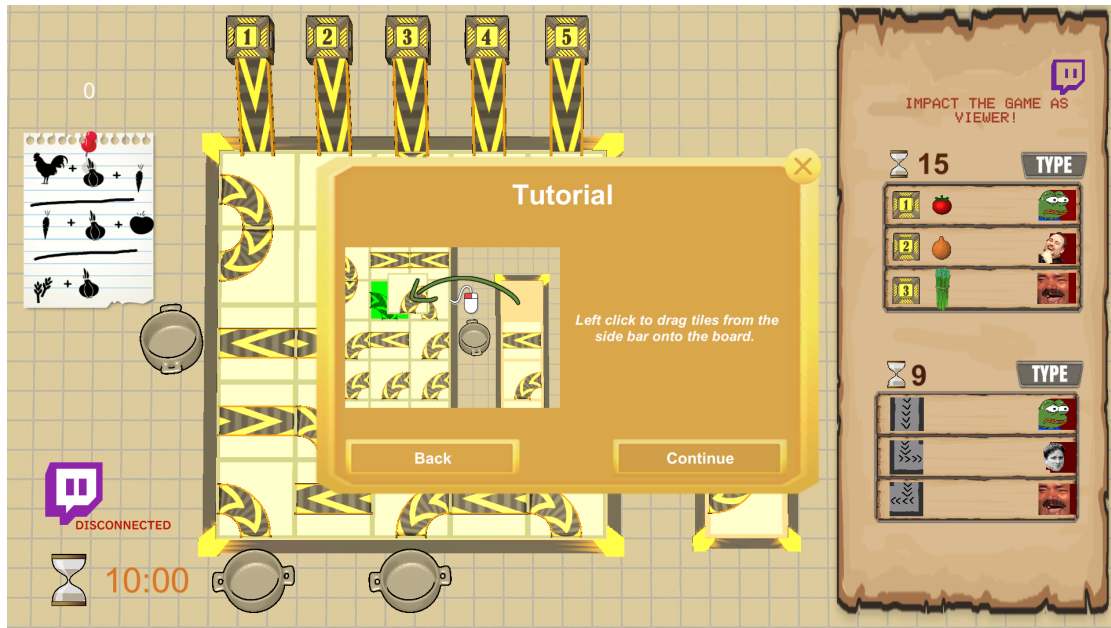


Figure 5: Tutorial pop-up at the start of a round.

as well, because the Twitch Chat would not generate enough new tiles to keep enough options open for the player.

## 2.1 Twitch Chat Inclusion

While it was definitely an interesting idea and development experience to include viewers of a live stream, it also came with its fair share of problems: Some of them were unfortunately not in our control. Those include the tedious set-up process for new streamers, a spam protection on the platform preventing the excessive repetition of the same message, a time delay between chat and the live stream and the fact that many of our testers just were not familiar with the Twitch platform in general.

Then there were issues we tried to account for, like giving viewers instructions so they know what they were supposed to do (see Subsection 1.5). Additionally, we prevented the viewers to fully take over the 'randomization' part by proposing ingredient spawns in a poll. This renders it impossible to completely stop the player from finishing recipes because mostly required ingredients are offered.

While all this was done to prevent the game from getting too chaotic and not handable for a player, it also meant we were effectively taking away power from the viewers. Right now, more ways people could influence the gameplay would be desirable.

All in all, it can be said that the balancing was one of the most challenging aspects as it turned out to be very difficult for us even though it had already been stated by fellow peers and their mutual critiques.

## 2.2 Task Scheduling

At the beginning of the course, we stuck to our planned schedule. On the one hand, there were some tasks which went faster than expected, like setting up the core managers for the Twitch platform, on the other hand things like creating the movement pattern for ingredients to move over conveyor-belt-tiles turned out to be a bit harder than first anticipated and was even refactored once. However, until Alpha Release it can be stated that we did follow the original schedule. Only then did we start to deviate from it a bit, because we spent most of the time addressing feedback collected during play-testing.

During this time we met more frequently each week and discussed which tasks are most important and needed to be done by who so every team member received a similar load. All in all, the schedule really helped us to get the project going.

## 2.3 General Remarks

The overall project structure was quite helpful in a sense that you always had a clear sub-goal you could work towards and we would not change it that way. It mostly helped us make progress. Even though our attitude towards the paper prototype was not fully positive at first because we needed to organize it fully online as a consequence of the current pandemic, it helped unleash our creativity a lot and in the end every team member knew towards which goal we were working.

## 3 Conclusion

To conclude, we are quite content with how the final release turned out to be and proud we tried to include viewers of a streaming platform into the gameplay as it is something we have not seen a lot of other games do. Of course, one can always improve a game by re-iterating and addressing more critiques by testers and normal players alike, however, for now, the current state should give a good impression of what we were going for.

In this final section, we try to answer the questions posed by the gamelab project structure document. Every team member was invited to write a sentence or two.

### 3.1 What was the biggest technical difficulty during the project?

The conveyor-belt-tiles and their respective movement patterns for ingredients were harder than anticipated. Also, we faced issues with the custom shaders written for OpenGL. The inclusion of the Twitch chat itself proved to be easier than anticipated. However, we had some technical difficulties with personalizing Twitch account details on runtime.

### 3.2 What was your impression of working with the theme?

The theme 'Chaos and Order' was really exciting. Playing with the word 'order' as in 'to order food' was quite funny. Overall the theme was much broader as we initially thought and allowed enough freedom for creativity.

### **3.3 Do you think the theme enhanced your game, or would you have been happier with total freedom?**

Both things have their own pros and cons. It is hard to tell whether complete creative freedom is better or worse. One probably has to try both to come to a conclusion. However, working with an arbitrarily defined topic encourages to try out something new and throws out of the comfort zone, which could be considered advantageous.

### **3.4 What would you do differently in your next game project?**

If another game using Twitch were to be made, we would strive for a more concrete plan about the viewer side of the project and how to include them more. Time discrepancy between streamer and viewers should also be taken into account, so the next idea would probably be slower or at least more lag-resistant.

### **3.5 What was your greatest success during the project?**

How quickly we were able to create a playable game with the Twitch interconnection set in place when other teams still had no real gameplay to show. As well as, how good the overall idea and our gameplay was received by fellow students participating in first demo stream.

### **3.6 Are you happy with the final result of your project?**

From our point of view, the project really reflects what we were going for. Some of us were also not familiar with streaming platforms at first, so it was exciting to create this form of 'Social Game'. The game could certainly benefit from some more playtesting-improvement iterations, but is already enjoyable and, as one of our Playtester said, "has a fun factor".

### **3.7 Do you consider the project a success?**

We learned a lot about developing a game in general, how you structure its schedule and how to formalize ideas on early stages. So we would call it a success alone for this reason. Additionally, we are quite content with our final release.

### **3.8 To what extend did you meet your project plan and milestones (not at all, partly, mostly, always)?**

We mostly reached our milestones. There was some overlap from time to time like with ingredient movement but never were we in a situation where something was not working at all putting the project's success in a real danger. We had to rethink some ideas and replace some tasks with others, but these decisions were made in favor of the final game and we would not call them deviating from our initial plan.

### **3.9 What improvements would you suggest for the course organization?**

More frequent mutual critiques so you stay a bit more informed about the current state of the other teams. Also, some form of exchange between teams would be nice. However, this is probably hard, due to the current pandemic.

On the topic of the pandemic, hopefully such situation will not occur again, but if the course would be forced to be carried out in such form, it could be beneficial to adapt some parts of the project structure document - physical prototype, playtesting - to online teaching.

## **4 Special Thanks**

We would like to thank this course's organizers to open us the possibility to try out this game concept as a practical course for our studies.