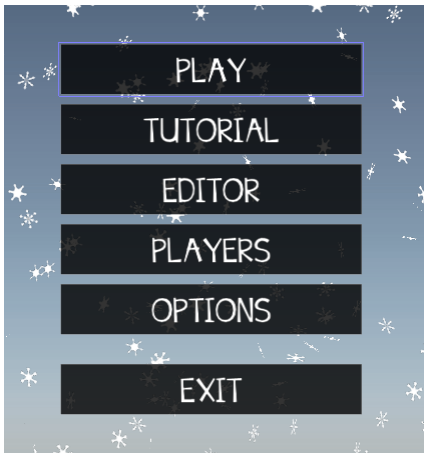
BRING BACK WINTER!

Conclusion Chapter

Benedikt Bitterli, Simon Kallweit, Marcel Marti

Changes since Alpha Release

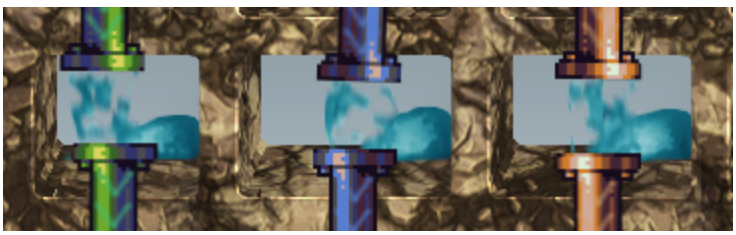
Since the alpha version of Bring Back Winter, we added more features outside of the actual gameplay.



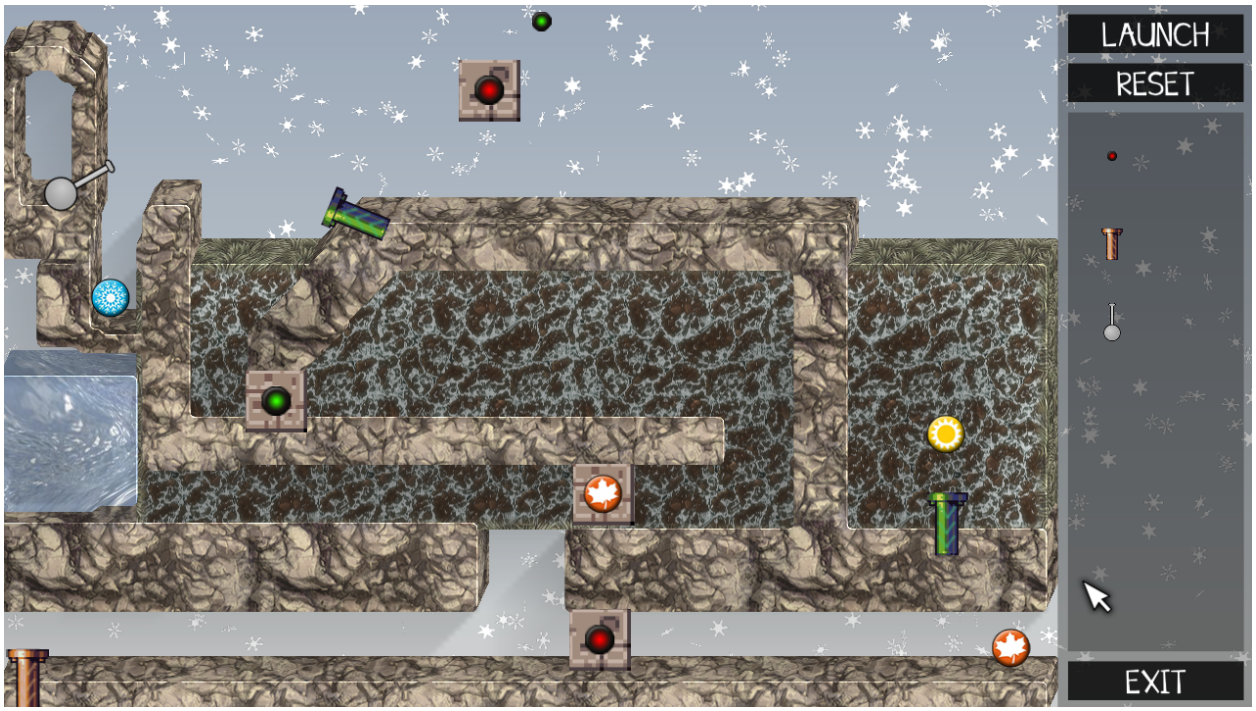
The alpha version consisted of a sequence of maps with increasing difficulty. Now the game supports more than just one sequence. When hitting the play button, players will now be redirected to an episode selection screen, where they select the story they want to make progress on. In addition to map sequences, we also added unordered map collections where players can play any map without having to unlock it.

Along with the new episodes, we also added support for multiple players, where each player has his own game state and progress.

We added visual indicators on the pipes to make clear in which direction the water flows. Testers in our playtest session had trouble understanding which pipe is an out- and which one an inflow. The indicators fix this problem by clearly showing the direction as arrows.



Along with the new features and textures, we added more maps to the game. The alpha version lacked maps using the inventory. This last update fills that gap.



Development Schedule

We were able to stick with our development schedule and reached all important milestones on time. During the development, we decided to leave out some of the high targets related to the fluid simulation. Adding these features would have been a big technical challenge and difficult to get right. We soon realized that having those additional game mechanics would not dramatically improve the gameplay, and we were certain that with the elements already implemented we could create a nice little game. This was the reason to focus on polishing the features already implemented instead of putting effort into new, less polished ones.

Functional minimum

- Fluid simulation
- Editable terrain
- Extremely basic, side view rendering
- “Sandbox” style gameplay

Low target

- Season Changers
- Switches and gates

- Season sensitive gates

Desirable target

- Water pumps
- Water pipes
- Textured terrain
- Season dependent graphical effects (snowflakes, rain, etc.)

High target

- Acid
- Fire and Steam
- Instant Freeze
- Music / Audio

Extras

- Post process refraction shader
- Rigid body physics
- Public level editor
- Online community level repository with rating system

Physical Prototype

We had a bit of a struggle with the physical prototype. Real-time fluid simulation does not really apply well to the concept of a physical prototype. We had to come up with some whacky turn-based way of simulating the fluid on paper, which didn't really help us in any way. There was one positive aspect nevertheless: we realized that it can be challenging to design good/meaningful levels. We created various levels and realized that they were more or less solving themselves, which would not challenge the player at all.

Playtesting

We think that the playtesting phase was very important and we feel that it could have been spread over a longer period even. Testing our game on various machines helped improve the compatibility of the game. Getting feedback from other players was both satisfying as they had fun playing our game, and giving us additional insight for things that we could improve. Due to lack of time, we were not able to improve on all the aspects pointed out, but we are certain that we have a solid game even without these additions.

Personal Impression

What was the biggest technical difficulty during the project?

The biggest technical challenge was to get the fluid simulation stable, fast and good looking. We put a lot of effort into this during the first two weeks of the project, as this feature ultimately decided on the success of the game.

What was your impression of working with the theme?

We had a hard time sticking to the course theme. In the early stages, we have been discussing many different game ideas, but most of them had to be abandoned due to not being in any relation with the theme. Also, one could argue that our final game does lack a bit with respect to the course theme.

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

We would definitely have been happier with total freedom. Some limitations may help with the thought process, but we would have welcome if there were different themes to choose from.

What would you do differently in your next game project?

Depending on the game idea, we would probably spend less time with the physical prototype and go directly with a playable prototype. Using the right tools and short development cycles, this process could lead to more insight about what works and what doesn't. Transforming the game idea into a physical prototype without changing the properties of the game too much can be challenging!

What was your greatest success during the project?

Watching other people play our game and having fun was one of the most successful moment during the development. Of course there were many little achievements during the development process, but realizing that the game is actually fun to play is probably the most rewarding.

Are you happy with the final result of your project?

Yes. We think we succeeded in developing a fun little game, given the constraints we were faced with.

Do you consider the project a success?

Yes. We tried to be ambitious in our goals while being realistic in what we can achieve in the given time. We believe that we found a good balance between challenging ourselves and delivering a finished game.

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

We were able to stick to our project plan and meet all milestones on time, which has required quite some effort at times.

What improvements would you suggest for the course organization? (perhaps in D1 evaluation)?

We felt that some of the lectures were a bit disconnected with the project timeline. It could make sense to fully use up the 3h lectures during the beginning of the semester, where the material is of actual value for the game proposals. This way, time would free up mid semester, where a lot of time is taken for the actual development.

Did you like the Unity framework?

Due to specific needs in our game, mainly the performance concerns of the fluid simulation, as well as the ingame editor, we decided to go with a custom written engine instead of using Unity, hence we cannot really comment on the Unity framework.