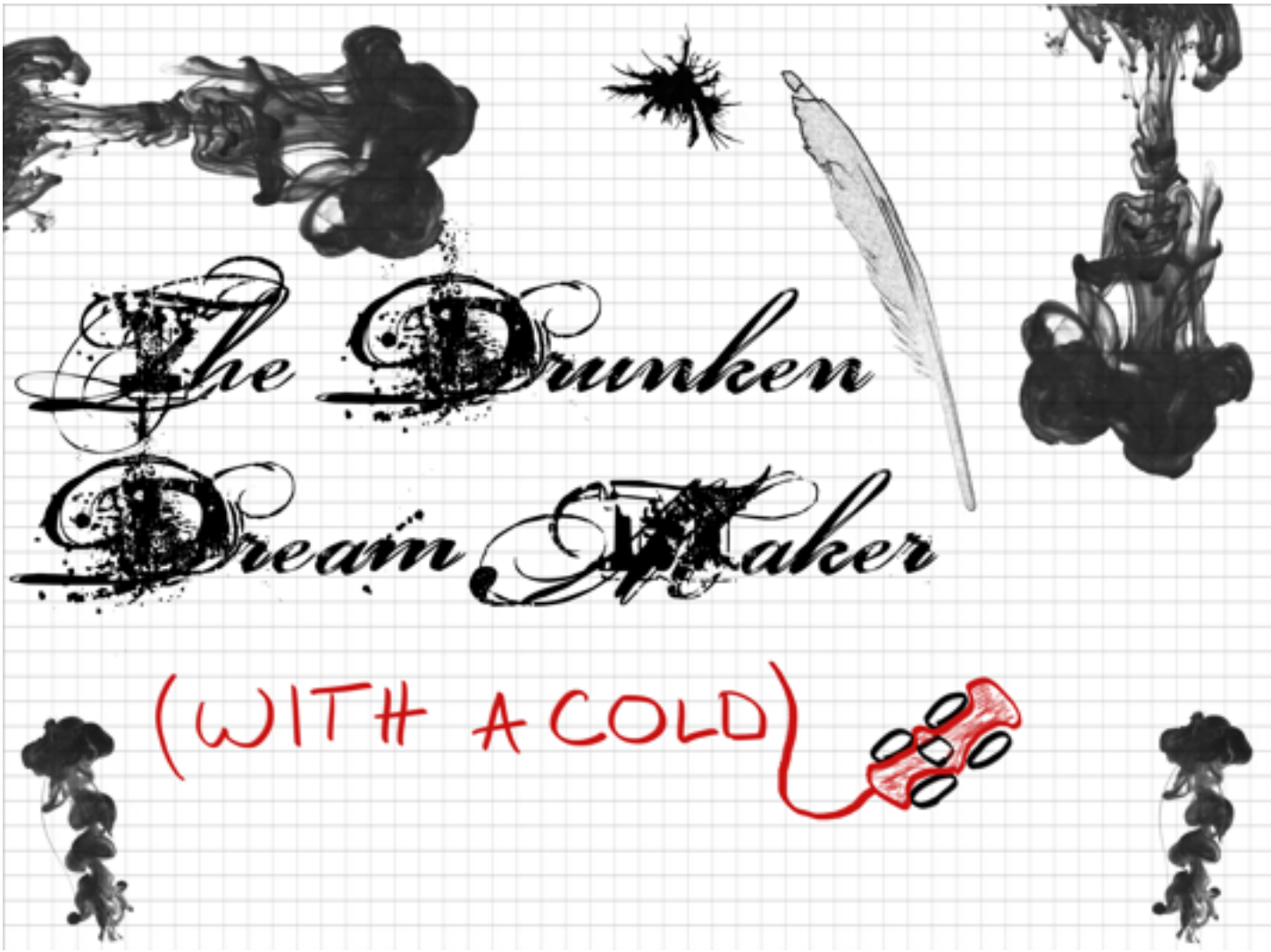
Triolozzi proudly presents



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Retrospective overview of the project

Looking back at the project's structure, we realized that the first two milestones have been much more important that we would have ever thought. We were so excited about creating a game that we wanted to pack a lot of features without even knowing how much effort they actually required. Fortunately we have been immediately told by the assistants that we had to keep things a lot more simple, and so we repeated the brainstorming process once again. It was really important to get a solid idea in the first place, and then to refine it in the second phase (physical prototype) by devising a set of well defined rules. The physical prototype also pointed out some flaws and loopholes that we did not think of during the brainstorming phase.

The whole process was essential in order to begin the implementation with clear goals. We doubt we would have had a working game, had it not been for these first two milestones.

We found the playtesting and alpha release milestones to be a bit too short. Although it is very difficult to allocate more time for these phases because of the fixed length of the semester, we would have liked to gather more feedback for improvements. Perhaps we should have planned testing sessions for the alpha release (and earlier stages as well) in order to tackle major issues as soon as possible. We were nonetheless happy with the results of the testing phase and seeing people having fun while playing our game was perhaps the greatest success during the project.

The project's schedule is very tight, but we were always able to keep the pace. As a team, we were really compact and we had a great experience working together. Thanks to this project we also learned to collaborate and communicate much more than we used to. It was also really important to plan the work to do and split the tasks evenly and according to each person's skills. We managed to complete all targets – from functional to high – with the exception of the REM phases. This part was dropped because we realized that there was no point in breaking the rhythm of the game with a separate phase and we also already had post it notes scattered on the race track. On the other hand, towards the end we decided to add power ups to make the game more fun and to compensate the REM phases.

We think the presentations to keep the assistants and other teams up to date were really helpful; the reports, on the other hand, were a bit superfluous for certain phases and took us some precious time that could have been spent on the game. As a suggestion for the course organization, we advice to reduce the number of reports to hand in.

As a conclusion, we are really proud of the game we created. Given more time, we would like to improve on some of the aspects, in particular the graphical appearance (which is unfortunately not one of our strengths). The final result is still very rewarding and we had a truly exciting time for the whole duration of this course.

In the next game project we should be a bit more careful about bugs and undesired behaviors of the game engine. Sometimes we left a few glitches (out of laziness) that later on became

more and more difficult to fix. Before implementing new stuff we should have had the patience of making everything stable, but we were to eager to see the final results.

Course theme

The "dreams" theme was received with different reactions in our team. At first it seemed very difficult to think of anything that would fit the theme, but as time passed we get more and more excited about it. This is an innovative concept and forced us to get rid of ideas borrowed from our favorite games and stimulated a creation process that eventually led us to the final game concept.

As it has already been mentioned in the past, it is very difficult to take care of the entire process of creating the game, especially about the artistic aspect. We were lucky enough to have a couple of friends (to whom we are very grateful!) that helped us out with some artworks and the sound effects, yet we could have profited more if we have had a talented person in the field that constantly worked with us.

Technical challenges

Although we already had some C# fundamentals, none of us had experience with the XNA framework. The main programming challenges of the game were

- the camera following the racers left in the game;
- the procedural drawing technique for the trails;
- the fluid simulation for the mucus;
- the creation of random race tracks.

Except the first one, all of the other features faced the problem of performance. As the memory management on the Xbox is not efficient, we spent a lot of time profiling the game in order to find and fix the bottlenecks. The problem is also that our game is very dynamic and the creation of obstacles is up to the players, therefore we had to foresee dangerous situations such as crowded tracks.

We did not like the XNA framework for several reasons. First of all, the performance issues related to the garbage collector gave us a lot of headaches that probably could have been avoided with other frameworks. Secondly, XNA is quite old and beside not giving us the chance to use new technologies it also has very few resources and sometimes the documentation lacks information.

Latest changes

During the final weeks we have been fixing the remaining bugs in the game and we also implemented some of the suggestions received during the playtesting session and in class.

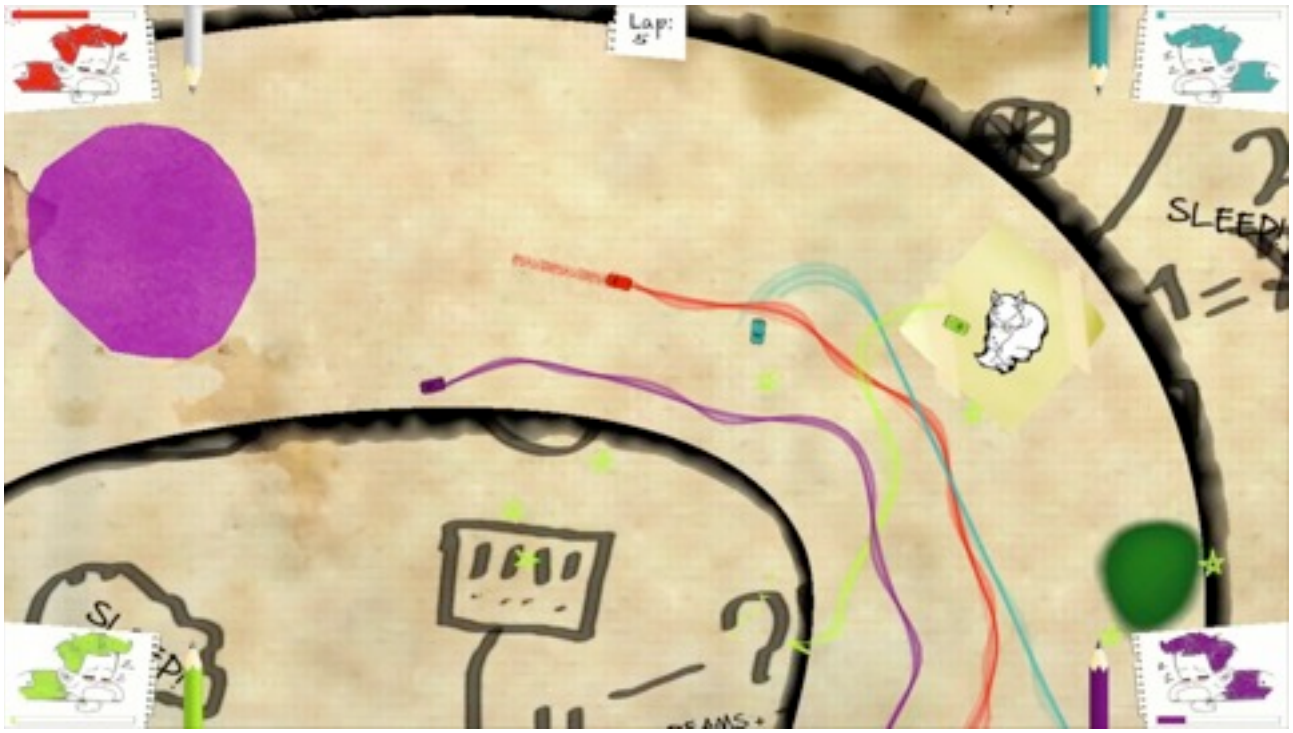
The most important additions is that we introduced power-ups when crossing post it notes instead of giving points to the player. This feature solved two problems: it makes the game more fun and also allows for dramatic game changes (e.g. the last player still has a chance to shorten the distance from the first one) and therefore the player immediately understand the effects of crossing a post it. Before that, players did not notice that the sleep quality bar was increasing and therefore they did not care so much about crossing post it notes. The nightmares of course do not give power ups, instead they slow the player down or introduce some sort of handicap.

A common desire of many players was the possibility to shoot. Most of them kept trying to press the buttons expecting something to happen, and this convinced us that we needed to add a new feature to the cars. We were skeptic about the shooting, since from the beginning our idea was to avoid a shoot-at-everything-that-moves game, but on the other hand we could not simply ignore this common suggestion. In the end we thought of a solution which seems to be a really good tradeoff: every player has the possibility to shoot a pencil drawn laser in each mini-race, in order to change the color of an obstacle by hitting it. This solution does not alter the main color mechanics of the game and it adds some nice variations to it. Moreover it helped to further balance the game, in the sense that now players cannot build groups of insurmountable obstacles anymore; this happened a few times during the testing sessions and the audience did not appreciate that.

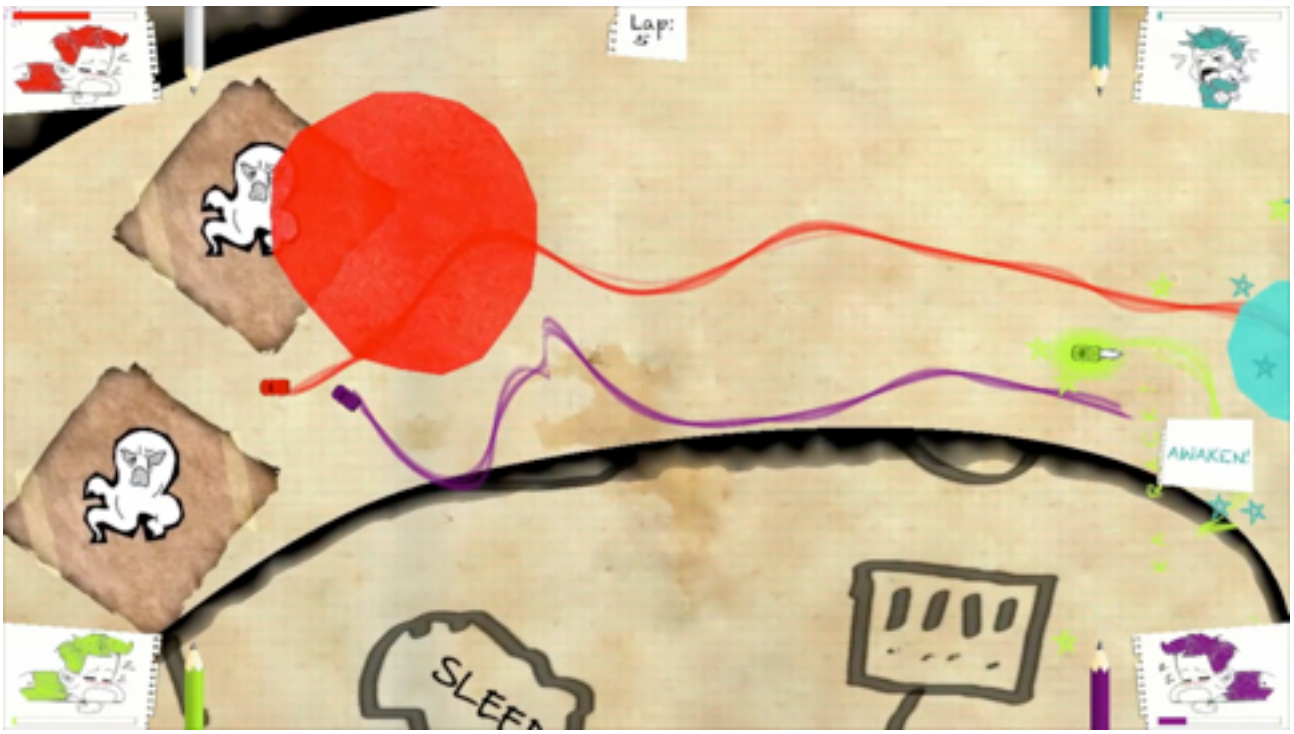
We also introduced a “sandbox screen” where players can try out the driving style before starting the actual game. The introduction of this screen is due to the fact that many testers had many troubles getting used to the driving style while playing for the first time.

Apart from that, we also introduced many minor adjustments to the game aesthetic to make it easier to understand.

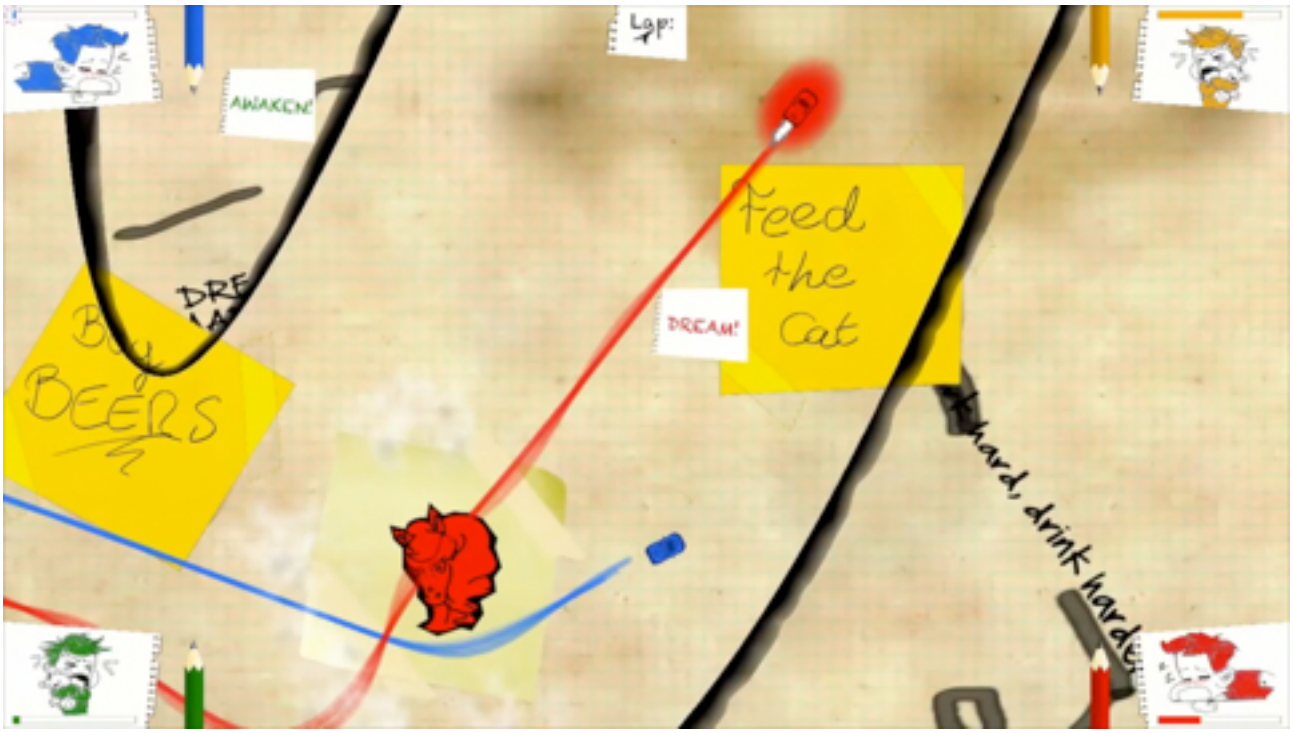
Screenshots



Red car shooting against an obstacles to change its color.



Red car crossing an obstacle after it changed color.



Red car getting a power-up. In this case the horse which increases the car velocity.

Gameplay screenshot: all the cars are drawing some obstacles.

Sandbox Screen: red and green cars are ready, blue and violet are still practicing the driving style.