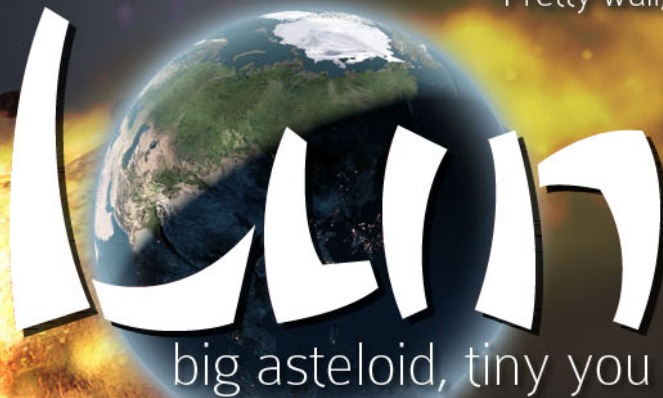


Final Chapter

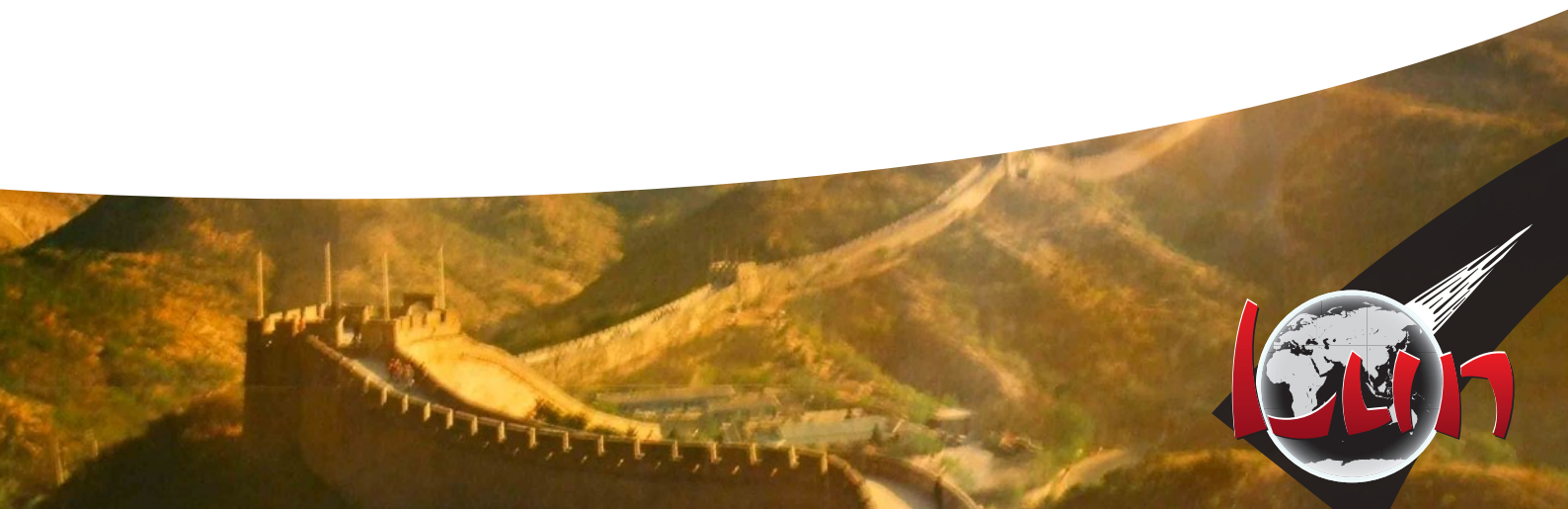
Historic Places and Events:
Pretty wall, pretty fast!



Lun
big asteloid, tiny you

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From past to today

On 23.02.2010 "Just 42" met the first time. During the first lecture of the Game programming laboratory Alessandro, Philipp and Rafael met the first time as a new Team. The purpose of this team was (and to some extend still is) performing all necessary steps to create a new game out of nothing. Starting from not even a glimpse of an idea the first thing which had to be done, was figuring out what the main strength and plot of the game should be. Shortly after that, the mission was written in stone: "FAST and ADDICTIVE".

Now, a semester later, "Lun" had its first appearance in public. What we made is a fast game, where you can steer a sphere for infinitely long. Only goal is to escape the approaching doom - if you can.

Starting in a rather slow level, where not only you but also the doom is rather steady, you will quickly be able to progress into higher levels where the game gets fast and faster.

As a sphere you are trying to flee the doom and while doing so, you collect coins which give special abilities and quite a lot of scoring points. Triggering these coins makes you faster, jump high or super strong.

The game is especially fun in multi-player mode where you can blind your opponents, or make them drunk so they do have a hard time coming along.

Implementing more and more interesting features led rather quickly to huge performance problems. Until now we only found one way to circumvent this problem: We had to remove some new features and go back to the basic idea of the game. The more players play the game the less extra (visual) features the game has. On the other hand, more and more player leads to more and more fun to play, because you can blame more opponents at the same time and you can really show how good you are and only the strongest player will be able to escape the doom.



From alpha to final

Since alpha release we mainly changed one thing: we made the game a better overall experience. We personalized the game, and made it more individual.

In Alpha release you could select how many players you are, and everyone got his own sphere colour. Player one always was blue, player two always green and so on. Now you can chose one from 10 different texture colours and 2 special textures like the moon or the earth.

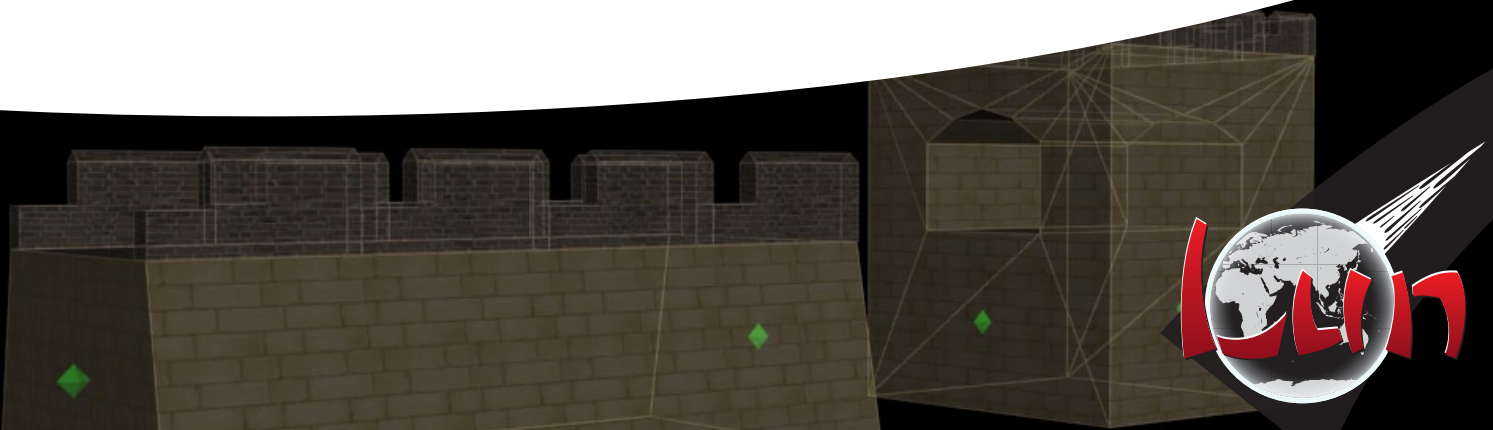
Further you can enter your name (up to 7 letters) which will be shown in the high score tables. Speaking of the high score table, it has to be said that we also changed this quite a lot. Now you will see how good your current lun was. If you made it into the top-10 your result will be shown in red. If you were not able to get into the top-10 your result will be shown in green below the ten best luns.

Second huge change is the completely new game mode "Be Picky". Here you are allowed to further personalize your game. Instead of just survive the longest, or collecting as many points as possible before you die, you can set your own new goal. Besides choosing the number of players you can select different game modes.

First new game-mode is called "Racer". This mode allows you to select the amount of levels which you are going to play. The first player getting to this level, wins the game!

The second new game mode is called "Collector". The idea is more or less the same as in Racer, but you select the amounts of points the players have to reach as first.

Third we implemented a Easter egg, namely a steamboat (it's a pirate ship in reality). Thus is due to the fact that the chinese word "lún" stands not only for rotation, sphere, wheel, but also for steamboat. This can be called by entering the Konami-code. In many games the Konami-code has already been approved to work as cool Easter egg. If you press following combination: Up--> Up--> Down--> Down--> Left--> Right--> Left--> Right--> B--> A--> Start you are allowed to play the game as a pirate ship cruising on a Chinese wall filled up with water, where the side walls are made out of wood an ratan.



As planned, isn't it?

One of the first things in the course we did is working out our concept plan with the five stages. This concept plan has been rewritten during the semester. And matched our current needs and wishes. The longer we worked on our game, the more special ideas came up and had to be implemented. Thus leading us to a completely fulfilled "desirable target" and some few points in "high target".

The work of the last week was mainly focus on personalization of the game experience, and thus we added a lot of cool stuff which was not directly mentioned on our development schedule.

To summarize this we have to say since working off the third stage, we rather concentrated on making the game a good experience than on implementing new features. We even had to disable some features performance-vice, thus we do not have stones or meteors any more.

In progressing the game as a whole project, we wanted to add some intro videos. We already built the videos, but we have not been able to switch them on. This was mainly due to the Video-player XNA tool, which has not allowed us to dispose the videos from RAM after playing them using too much memory.



The Game Programming Lab

As the whole class was split up into seven groups, the weekly meetings were rather interesting. Here we could see where other groups are and how they progress. Further we learned a lot on game design aspects, from building prototypes to visualize the core idea of the game, to how important music in games is. All this made the course a rather good experience, with lot of fun moments.

As the semester is a rather short time to deploy such a huge programming task, our semesters were rather crowded. Quite often awake (and coding) till 1 or 2 am, working and despairing, further working and bliss.... Up and downs all the time.

The game overtook most of our free time. Friends and family came second and third, most important thing this semester was Lun. As time-consuming and challenging task the game formed our life and organized our social interactions.

But, looking back to our first approaches of the game, the progress looks very cool. From week to week the feeling that the player gets playing the game has gotten better, the visual and auditory impressions were better worked out and the game modes became more playable.

Finally we proudly can say, we made the best we could during this semester. We reached a lot and created fun out of nothing but time and nerves. Lun is complete as having a outright menu, a full highscore table, as much responding impressions as the X-box can give and even the possibility of naming your sphere. The game presents many different modes which all claim different skills. And the more you play the game the harder it can get, because there is a near infinite number of levels and thus difficulties.

The track progress with levels, so the further you come the more different and challenging trackpieces will be unlocked. From save pieces with both sidewalls and no gaps, to pieces where there is nothing left than just a few columns on which the player can jump, from just going left and right, to having steep up and downs and even uneven gaps, there are about 18 individually pieces in different skill levels.



Conclusion

Right in the middle of this Semester, we decided to go from the "standard" XNA Framework, to the more sophisticated XEN API. Thus we were able to increase performance quite a bit. This was necessary due to the fact that we had something around 8 fps in the 4-player mode. With the newly integrated XEN API we were back at about 30 fps. But as we further implemented new stuff, we again lost our good performance. Thus in the end we have to stay with a rather basic version in 4player mode.

If we should start again with a new game, we would integrate XEN API from the very beginning. Fact is namely, that XEN is not a new tool, but rather a basic logic, and thus has to be the formed as base of a game. Despite of new Sprite Elements and a new Particle System XEN API also provides some other handy methods, like a "onpress"-check for the buttons and keys, which checks if a button just got pressed.

The greatest success therefore is on the one hand the performance we reached in the final version. On the other hand we implemented a rather complicated environment which is bound to the track. Thus we are allowed to use a randomly generated track and can be sure the environment will fit the location of the track.

As our game comes along as a rather enclosed game, we are pretty happy with what we have reached. Of course, we do have another 100 ideas which are not covered until now, but would make the game experience even cooler. On a happiness scale going from 1 to 100, 1 meaning absolute sadness, 100 meaning we are totally happy, we would set the game project on mark 92.

The project as itself is a success in the sense that we were able to build a rather complex but easy to understand and fun game out of nothing. Our central ideas came into the project and helped us form the final version.



Already mentioned we made it well into the “high target”. But here we could not stick to the milestone as we originally wanted to, so we started to implement stuff which is not covered by the initially proposed project plan. Further the XEN API integration was somewhat a week work in which we could not reach anything else. This led to a small divergence in project plan and actual work. Which could not be covered totally until the end. But this way we reached a playable 4player mode (see beginning of this section).

The course structure was on an overall scale well outworked. As class we started on a new games, and now at the end of semester we can proudly present OUR project. Nonetheless a few things were missing in the course. To a start, the presented “project structure” - our game programming guideline – was last years. As there have not been major changes to this structure, just changing the dates in the overview would have helped a lot to understand what we are about to do.

At the beginning of the course everything seemed to be well explained and structured, but the longer the course was the less structured and organized the course appeared. There were moments when we as a group sat together and discussed if we should present our current game, or if the course is led by you guys. And if we should present the current state it was often not so clear to what extent and in which kind, playing the game or discussion with some slides?

We also would like to make some suggestions to further enhance the course. For once it would be great for every group to have a mentor, which is assigned to the group and eventually also has access to the code the group is working on. This way he could give good tips and feedback whenever he feels something is working wrong. This kind of tips would also be cool as a feedback to our presentations we had to held. You are professionals and we are beginners, so it would really be nice to hear what you think of our progress and what you would do at this stage. In the first weeks we presented our milestones table. This would also be a moment where we have not been sure if this is doable at all.



The last mentionable things is our idea of making a DVD of all the outworked games in this course, so we could try them out at home and have a “present” of the course this year. Further it would be nice if we would have been able to try them out during the semester, so we would have a better feeling for what the others do, and how they are progressing.

The final presentations, especially to audience award could gain in weight if the audience actually would be allowed to play the games. What about some X-boxes right in front of the presentation room, where the audience could play the games and after that listen to the presentations or vice versa?

To the last debriefing point we just want to say that we liked XNA as it is. There are a lot of pretty cool tools already built in. As the model reader and parser. The graphics do work better and faster on the XEN API, which for us was on of the best tools we could have used. Pity in XEN API is, that there is no documentation at all. But as this whole API was written by one guy, who does have a forum, you will get a rather quick answers and pretty cool tips who to progress. With XEN API we also were able to implement a particle systems which is rather easily to understand due to its format in XML style.



Visuals - New Elements

The alltime highscore list!

The screenshot shows a game window titled 'lun [DEBUG API]' displaying a highscore list for 'Survival-luns'. The list is titled 'The best 10 "Survival"-luns' and contains 10 entries with columns for Rank, Name, Points, Level, LunTime, and Date. At the bottom, a player's current score is shown in green text: Philipp, 1863, Level 1, LunTime 0:1:628, Date 02.06.2010 14:55:32.

Rank	Name	Points	Level	LunTime	Date
1	Inith	8877	6	2:16:306	01.06.2010 15:35:42
2	Boosst	8896	6	2:16:306	01.06.2010 15:35:42
3	Omith	7278	5	1:53:458	01.06.2010 15:31:00
4	Boosst	28464	5	1:53:458	01.06.2010 15:31:00
5	Omith	6724	4	1:29:420	01.06.2010 15:32:42
6	Boosst	9293	5	1:29:420	01.06.2010 15:32:42
7	Tmith	3106	1	0:40:902	01.06.2010 15:28:50
8	Boosst	5303	3	0:40:902	01.06.2010 15:28:50
9	Philipp	1997	1	0:18:751	02.06.2010 14:46:23

Philipp 1863 1 0:1:628 02.06.2010 14:55:32

And a very detailed score screen!

The screenshot shows a game window titled 'lun [DEBUG API]' displaying a detailed score screen titled 'LOST!'. The screen lists various tasks with their scores, multipliers, and total points. At the bottom, the total score is displayed as 'Total: 18143'.

Task	Score	Multiplier	Points
LunTime	235.6s	x 10	2356
Times fell off the wall	13	x -200	-2600
Longest time on wall	75.9s	x 20	1517
Time Flying	30.5s	x 20	609
Longest Flight	2.8s	x 50	138
Time lunning to Doom	16.5s	x 50	825
Longest lunning to Doom	0.0s	x 100	0
Time riding the Doom	0.0s	x 100	0
Longest riding the Doom	0.0s	x 150	0
Coins collected	26	x 100	2600
Coins used	17	x 100	1700
Levels played	11	x 1000	11000
Players killed	0	x 10000	0

Total: 18143



Customize your name and style



Secret boat racing mode! Because it's lun.

