Contents

1. 2017

1.1 October

Legal Announcement (2017-10-04 11:11)

"Stargate: First Assault" is a Fan-Project based on the Stargate Series.

It is only used to get to know the basics of Unity programming during studies.

We do not own any rights on the Stargate franchise. No commercial use is intended.

Midterm Summary – SGFA Productions (2017-12-13 17:10:05)
[...] Legal Announcement [...]

Final Presentation – SGFA Productions (2018-07-01 13:17:39)
[...] Legal Announcement [...]

Week 1: Vision (2017-10-08 17:49)

Please note: due to website-restrictions, videos have not been embedded. A YouTube Account has been created to allow a better understanding of the development process.

Ideas

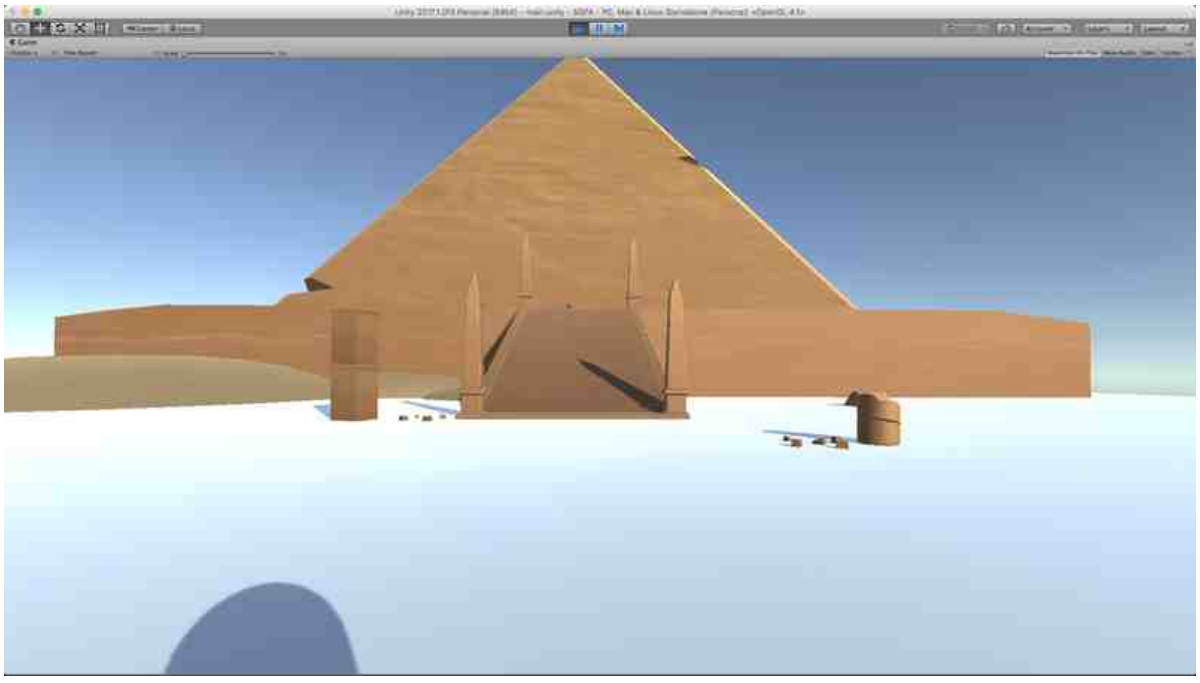
Currently there are 2 project ideas: Stargate: First Assault and Codename Phoenix.

Within the upcoming week (09.10. - 15.10.) we will decide, which project is going to be build.

In the following you will find first mockups and illustrations, how the different games could work.

Stargate: First Assault

A third-person multiplayer shooter based on the Stargate universe, featuring one map with two factions.

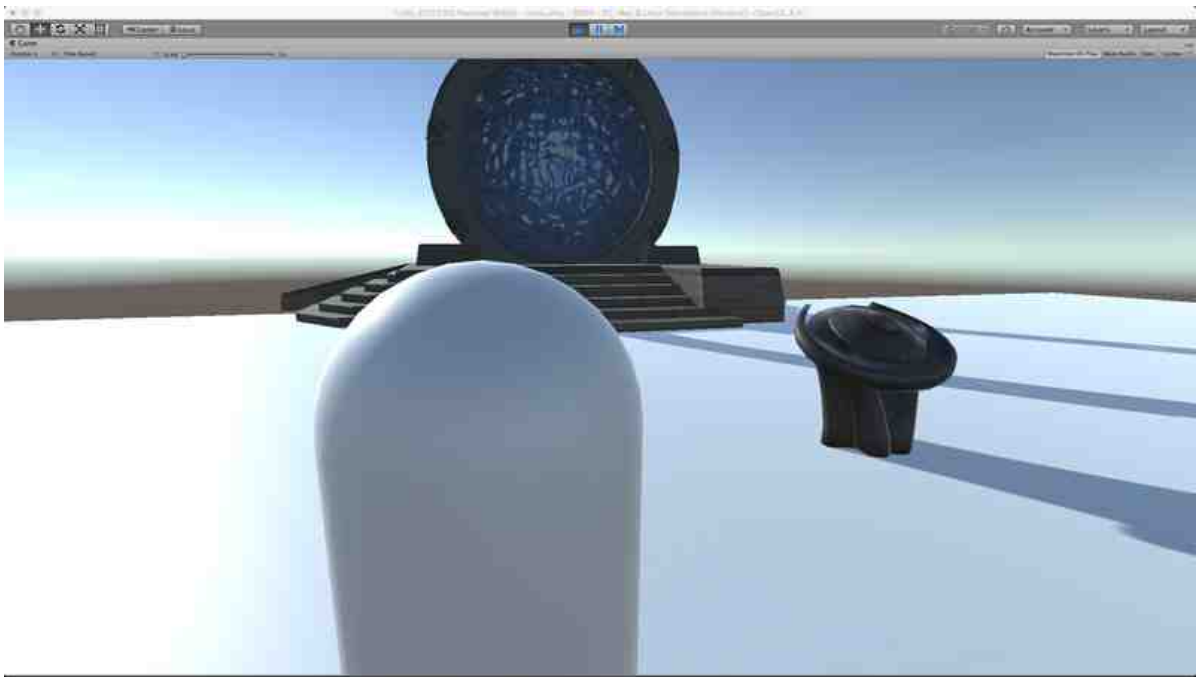


SGFA: Pyramid outside first look (low poly)

The map would be build in / around a pyramid on a desert like planet.

In general, development would be divided into several parts:

- multiplayer
  - server, how many players could join per team, team-balancing
- map-design
  - location control-points, paths, blocked paths for each team
- modelling
  - characters, weapons, ingame objects
- gameplay
  - how does the player behave to movement, balancing, HUD
- physics, effects
  - explosions, gravity, map-behavior (do explosions have an influence)
- menu
  - start-screen, settings-screen

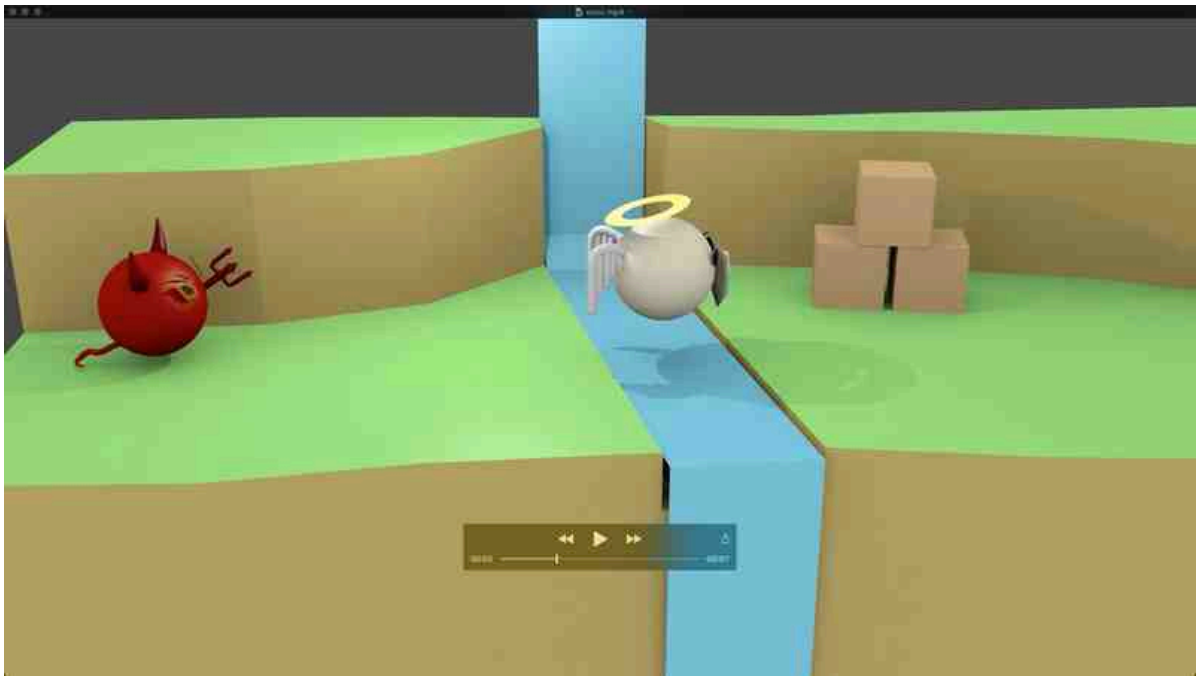


SGFA: Gate 3D-Person Controller

Depending on the success of each topic, the game could be expanded in nearly every subject. More players, more characters / models could lead to a team- and class-based gameplay, where different classes have different abilities, to help each other. Regarding these abilities, new weapons could be introduced, which influence the physics in an unknown way. The game mode itself could be expanded by adding new game modes to it and make it multistage based (multistage = combining different game modes to one. Finishing first game-mode leads to start of the next game-mode during the same match). In addition to that, the map could be expanded by defining new objectives.

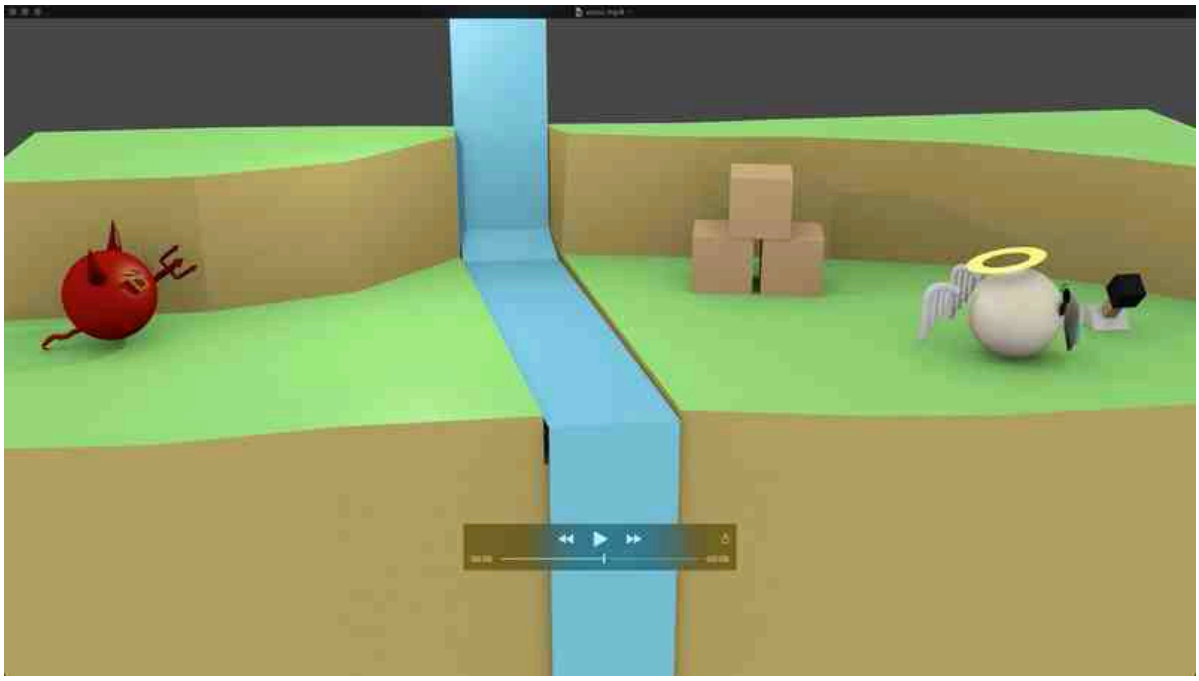
Project Phoenix

Project Phoenix combines Jump'n'Run and Adventure in an exciting new way. Creating a world, in which 2 players have to find a way together through several levels on one keyboard.



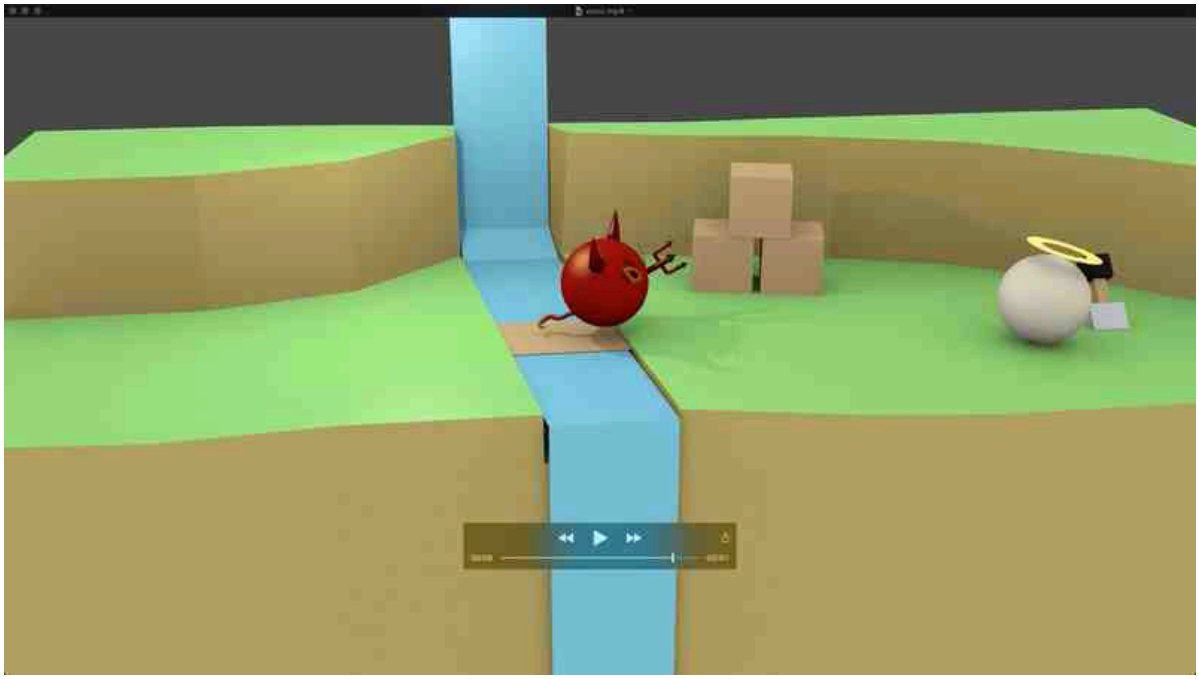
Phoenix: One character can jump

Each player has its own possibilities and has to assist his teammate, to achieve more points and to be able to move on.



Phoenix: Trigger on the other side

Just like SGFA, Project Phoenix has to be divided into its own topics. It can be expanded as well, even if the expansion would be more based on level design.



Phoenix: Trigger creates a bridge, other player can follow player one

The game will be based on a completely new story, which will be presented within the next weeks.

To get a better understanding [1]follow this link to get a first impression of the concept work on Project Phoenix.

1. https://youtu.be/vTCsIDhwnS0

Christopher K. (2017-10-09 10:28:48)
Hey guys, two cool ideas in my opinion. But I have to say the idea of "stargate: first assault" seems to be very complex and might be a little too much - at least that's my impression. The idea of "project phoenix" seems to be nice and simple, but could you provide some additional information on the background and the game flow? Regards, Christopher

sgfaweb (2017-10-09 10:46:04)
Hi Christopher, thank you for your feedback! We appreciate any thoughts on our ideas. Regarding your question about Project Phoenix: We would create a story around the levels, allowing the players to dive into our newly created world. The game would start with a simple level to get to know the basic gameplay. In further levels more puzzles would have to be solved by the players to finish the game. Each puzzle is based on team play. Therefore we would provide a single screen experience on one computer. While proceeding through the game you would be able to gain new individual abilities for each character, to enhance the gameplay-experience. Stargate: First Assault on the other hand would allow more exciting gameplay and could be expanded from a very basic shooter to a bigger one with vehicles, more classes, game modes and more. We would start with a pretty simple build, in which only the basic functionality is implemented. In the following months we would try to expand it as far as possible, to learn as much as possible. Using SGFA as project, we could test a lot of stuff (map-behavior, environmental change) and experiment with multiple areas of the game (including vehicles, changing physics, expanding multiplayer). Sincerely, Your SGFA CCD (Customer Care Department)

Andre M. (2017-10-09 12:34:13)
Hey! The second idea sounds awesome! It's quite simple and encourages team-play. :) Will there be a 3D landscape where you can run in any direction or will it be a 2D jump-and-run with 3D graphics like "New Super Mario Brothers Wii"? Kind regards, Andre

sgfaweb (2017-10-09 13:22:47)
Hi Andre, thank you very much for your input. We will experiment, which method fits more likely to our product. At this moment we are planning to design a real 3D world, in which you can move in any direction. This would allow more complex riddles as well as more exciting adventures. Best regards, Your SGFA CCD (Customer Care Department)

Midterm Summary – SGFA Productions (2017-12-13 17:09:38)
[...] Week 1: Vision [...]

Final Presentation – SGFA Productions (2018-07-01 13:17:09)
[...] is a conclusion of all the work we have done in the SE Course according to our Vision (and further our Project [...]

Project Future (2017-10-09 19:55)

As mentioned in an earlier blogpost, we had to decide between 2 project ideas.

After many discussions and some feedback from other students, we came to the conclusion, that implementing Project Phoenix is more likely possible and allows a great insight into game development as well as Stargate: First Assault could have provided.

Therefore Project Phoenix will be renamed to: Souls Gathering: First Alliance.

In the following weeks we will focus on concept work to provide a better understanding of the gameplay mechanics and to allow a smooth start of the upcoming implementation process.

So stay tuned for further updates and subscribe to our Website and [1]YouTube Channel, so that you do not miss a thing.

1. `https://www.youtube.com/channel/UCsmYQw0P4Y5Fux7h8odobow`

Midterm Summary – SGFA Productions (2017-12-13 17:10:08)
[...] Project Future [...]

Final Presentation – SGFA Productions (2018-07-01 13:17:11)
[...] This is a conclusion of all the work we have done in the SE Course according to our Vision (and further our Project Future). [...]

Week 2: Team & Technology (2017-10-11 12:18)

During the development of Souls Gathering: First Alliance it is important to distinguish several project parts from one another and to split the work between the developers, allowing a fluent implementation process.

Therefore following rules have been assigned to the depending developers:

- Business Designer: Leon
- Requirements Specifier: Leon
- Designer: Leon
- Implementer: Florian
- Tester: Florian
- Project Manager: Florian
- Tool Specialist: *both*
- Configuration Manager:
  - Blog: Florian
  - YT: Leon
- Change Control Manager: Florian

Please be advised: Due to the fact, that only 2 people work on this project, assigning roles on the RUP Basis does not necessarily work as intended. Therefore this must not be interpreted as strict role assignments, but as responsibility allocation.

In general we will try to split the work according to the needs of the project - first, one person will focus on implementing the controller and the basic logic, while the other person will concentrate on first model design. Later both will focus on professional development to achieve better gameplay and physics.

Regarding the technological aspects: the game will be created with Unity. For sharing files we will use a social media group as well as GitHub to share code-based files. As IDE we will test Unity's own implementation environment. Furthermore we will use targetprocess as project management tool.

FlyMusic (2017-10-11 13:46:51)
Hey all, thanks for keeping us up to date with your great project. I'm looking forward to see the first results of your development. You are right, the quite small number of team mates makes it hard to match all the roles. Besides that, regarding which criteria are the roles spread among your team mates? You also mentioned the technologies you would like to use. Which testing framework will you use to create automated tests? Sincerely, FlyMusic

sgfaweb (2017-10-11 13:58:37)
Dear FlyMusic, thank you for your feedback! - We tried to figure out who has foreknowledge regarding specific topics. We came to the conclusion, that Leon knows how to work with blender and Florian knows the basics of Unity Development. Roles, which are not oriented around these criteria, have been splitted as equally as possible with regards to existing interest in a specific assignment. As far as we know, unity provides its own framework for automated tests. Once development has started, we will provide additional information on this topic. Best regards, Your SGFA CCD (Customer Care Department)

Mix-It! (2017-10-12 11:20:38)
Hello SGFA! Your project sounds very interesting. I like how detailed your blog is. Your decision why you choosed this idea and not the other one sounded logical to me. Also I think it's great that you provide an YouTube Channel. What projectmanagment tool will you be using? I'm looking forward to see how your project develops. Regards, Mix-It!

sgfaweb (2017-10-12 17:15:10)
Dear Mix-It, thank you very much for your comment and your feedback. We appreciated it a lot! We are going to use "Targetprocess" (https://www.targetprocess.com). It delivers many functionalities and is used by certain big companies as well. So we will test it out and - hopefully - stay with it. Best regards, Your SGFA CCD (Customer Care Department)

Midterm Summary – SGFA Productions (2017-12-13 17:09:41)
[...] Week 2: Team & Technology [...]

Roadmap SEM2 – SGFA Productions (2018-04-09 11:47:03)
[...] The team stays the same, as further described in Week 2: Team & Technology. [...]

Story (2017-10-16 08:57)

What makes a game immersive? Of course, there are several aspects that need to be covered, to develop a truly immersive experience. Gameplay, Graphics, the amount of players - each creates a specific feeling, that delivers depth to the game.

We start from the very beginning. Something, most games do not deliver anymore: a Story. A story within the game allows a much deeper look into its world and creates an individual memory.

Therefore, we will create - step by step - a story line which gets richer with each level. We are very happy to introduce our first story snippet, which illustrates the starting point.

"From the very beginning, Death has been a transition between life and afterlife. Heaven and Hell always believed, that nothing would change this - until now.

One day, no souls found their way to them. Wondering what happened, they had to make a shocking discovery. Death has turned against them, collecting the souls on his own, to gain more power and to overthrow the world we know - No heaven, no hell, just death with no chance of finding peace.

Join the exciting adventure of Heaven and Hell, working together to protect the world from its ultimate apocalypse. Solve riddles, free souls and fight against the ultimate evil."

Subscribe now and stay tuned for further updates!

First sneak peek on the story of SGFA

FlyMusic (2017-10-18 12:03:18)
Hey SGFA, nice concept! I really do like your vision of an ongoing story which guides through the game and I am looking forward experiencing the finished story. Btw, will there be a conception for all the fantastic characters in your game on this blog? Best regards, FlyMusic

sgfaweb (2017-10-18 14:32:01)
Dear FlyMusic, thank you very much for your feedback. For now, we can not give any further information. We will publish more concept work during the next weeks and can not wait to show you more - so stay tuned! Sincerely, Your SGFA CCD (Customer Care Department)

Midterm Summary – SGFA Productions (2017-12-13 17:10:11)
[…] Story […]

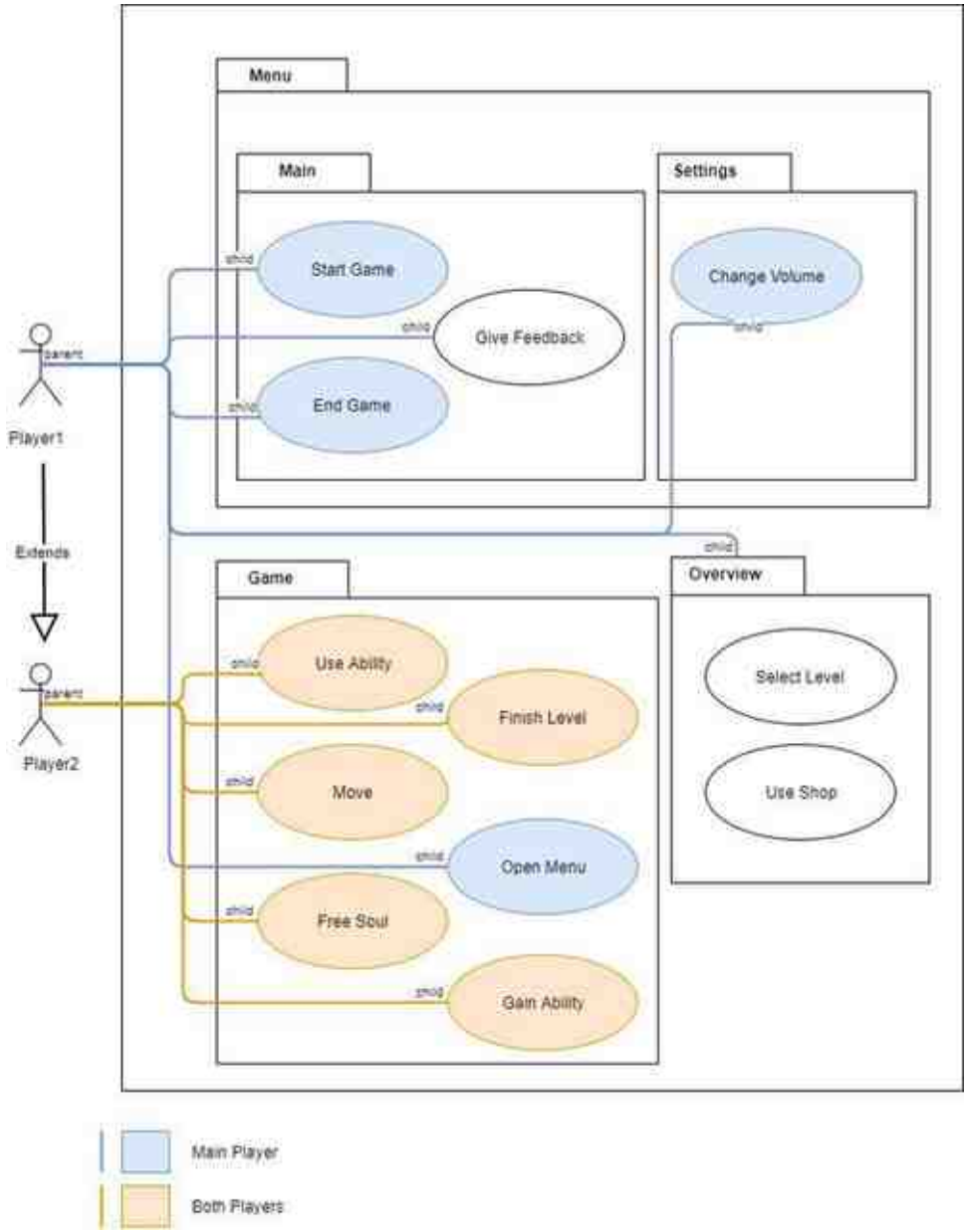
Final Presentation – SGFA Productions (2018-07-01 13:17:40)
[…] Story […]

Week 3: SRS (2017-10-22 19:34)

Todays update focuses on the Software Requirement Specification (SRS) and our Overall Use Case Diagram.

SRS: [1]SGFA _SRS

Use Case Diagram:

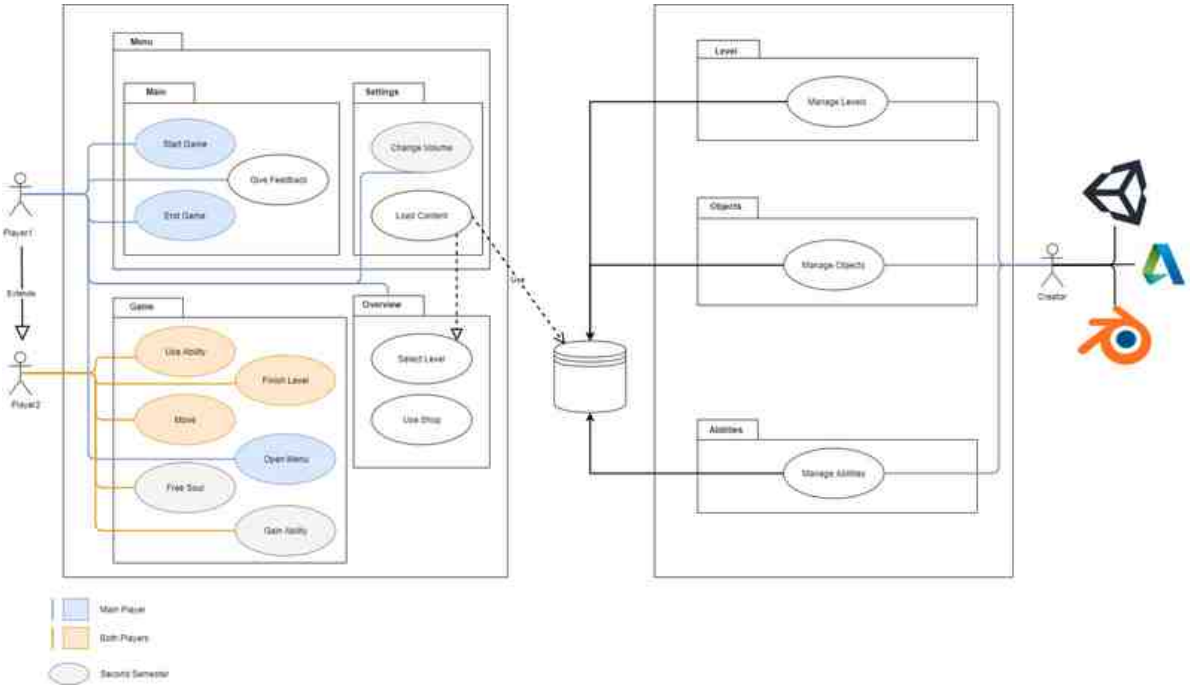


Please note: Development of colored UseCases will start this semester and are planned to be finished in the second. Non-colored UseCases are tentative.

But there is more

In addition to the standard UseCase Diagram, we also wanted to give an overview of the development process behind the game and furthermore, how we could expand the game using a live-service. In the following Use Case

Diagram you will find a possible illustration of these thoughts.



Let us know your thoughts!

1. `https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/SRS.md`

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wgplanerblog (2017-10-23 11:35:20)
Hi sgfa team, thank you for keeping us up to date! I think you did a good job on the Software Requirement Specification (SRS) and the Use Case Diagram, but I have some suggestions for improvement: - You could add some scope definitions to your Use Case Diagram so that your readers know when to expect which feature - You could mark the sections of your Software Requirements Specification which you can not apply with not applicable (n/a) Best regards Arne

sgfaweb (2017-10-23 11:38:20)
Dear Arne, thank you very much for your feedback! We will have a look into our files and try to enhance them using your suggestions. We will notify you, when the documents are ready to go! Sincerely, SGFA CCD (Customer Care Department)

nikolasadrianpatrick (2017-10-24 23:31:53)
Hello SGFA-team, your SRS looks pretty good! However, the graphics included in this blog entry are rather pixelated (especially the 2nd image) - do you think it would be possible to provide an image with a higher resolution, or even provide the graphics in the .svg format? Other than that, there's not much to criticize about your SRS. Obviously, you can't give a detailed description for every subitem, so that's not a problem. One thing you could do, although it's not a requirement, is to host the SRS as a markdown document on your github - this makes it accessable more easily. Furthermore, by using anchor tags, you can easily provide up-to-date graphics at all times. Greetings Adrian from NAP

Midterm Summary – SGFA Productions (2017-12-13 17:09:44)
[…] Week 3: SRS […]

Week 4: UC (2017-10-30 12:46)

Today we want to give an update on our Use-Cases so you can understand the way our game is working.

The first Use-Case we want to give a more detailed description of, is the Use-Case to move:
https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/Move/Mo ve.md

The second Use Case is a little less specific for our game, but important for every Game that exists. It's the Ability to start the game:
https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/StartGa me/StartGame.md

The documents will be updated within the next week so stay tuned for more Information and let us know your thoughts on it!

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theexcitingcompany (2017-11-02 19:22:29)
Hey there, We like the progress you make week by week and are excited to see more of it. Both your UC-Diagramms follow a logical structure and are easy to access at your Github. Nevertheless, we'd advise to write something about those Diagrams. You can have a look at our Git Repo to get an idea of what I'm talking about. https://github.com/Toaster996/softwareengineering/blob/master/documentation/U Cs/SignUp/uc _sign _up.md Cheers, Jonas

sgfaweb (2017-11-03 09:30:04)
Dear Jonas, thank you very much for your feedback. It's a pleasure to inform you, that we forwarded your advise to the belonging department and that we will update our files within the next few hours. Sincerely, SGFA CCD (Customer Care Department)

FlyMusic (2017-11-03 09:47:53)
Hey SGFA, thanks for the post. I really like your animated mockup, it gives a good impression of how the game will look like. Maybe you could integrate the use cases into your blog post. Also, both of your use cases have no starting point. If this is not intended, you could take a look at that. Best, FlyMusic

sgfaweb (2017-11-03 09:52:14)
Dear FlyMusic, Thanks for your comment. We initially wanted the use cases to be in the blog post. Due to rendering issues, we decided to remove them. Regarding the starting point within the use cases, we are glad to inform you, that we already changed it - Starting points do now exist. Thank you very much, Your SGFA CCD (Customer Care Department)

Midterm Summary – SGFA Productions (2017-12-13 17:09:47)
[…] Week 4: UC […]

1.2 November

Week 5: Scrumming (2017-11-07 20:52)

This week we want to give more insights on our development process by introducing our Project Management Tool: [1]Targetprocess

Using it, it is very easy to manage the PM related issues and to plan our sprints.

This board maybe helps understanding our process of scrumming and how we assign the tasks to the Sprints and persons:
https://tauboard.com/v/7bf4a5f983606ea69e7b005b8077399c

Due to some access restrictions, we had some troubles getting started. So stay tuned for the following week to get a deeper insight into the development process.

If you have any questions, feel free to comment.

Your SGFA Team

1. http://www.targetprocess.com/

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wgplanerblog (2017-11-08 09:35:30)
Hey guys, I think you did a good job on your Scrumboard! It's nice that you've already defined some User Stories and Issues. Could you please link your Burndown chart in your blogpost, so that everybody can follow your process? Best regards Arne

nikolasadrianpatrick (2017-11-08 09:56:14)
Hey there, your board looks good so far, although you seem to not have set the estimated time. Now while I can't view your different user stories in detail, the sprint says "4.5 of 0 h assigned. 4.5h overhead.", which sounds a lot like you only specified the actual, required time, not an estimation beforehand. Other than that, it would be nice if one could view your scrumboard in detail without being part of the project. If your tool doesn't allow that though, as you mentioned, you could maybe create a "guest" account with viewing rights only? I don't know if that's possible with your tool, but if it is, you could put the credentials on your blog for the other students to view your scrumboard. Greetings NAP

Midterm Summary – SGFA Productions (2017-12-13 17:09:50)
[…] Week 5: Scrumming […]

Week 6: Feature Files (2017-11-13 18:06)

Another week went by and the development-team is working hard to create the first playable levels. Waiting for new game-updates, we are happy to present to you our first Feature Files.

These can be found within our UseCase definitions:

- [1]UC: Move
- [2]UC: Start Game

As always - let us know Your thoughts in the comments below!

1. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/Move/Move.md
2. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/StartGame/StartGame.md

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theexcitingcompany (2017-11-14 09:59:41)
Hello Souls Gathering, Your blogpost looks really nice but i noticed that your activity diagram and the feature file do not match for the UCs. As the feature file is intended to test the use case with all lines according to the diagram you should either edit the diagram or the feature file. The different routes you can take in the diagram are equivalent to the different scenarios. In your start game UC you defined 2 different scenarios that are in 1 route according to the diagram. PS: you might want to add a link to the feature file in the UC document and not just the image. Kind regards, Philipp

sgfaweb (2017-11-15 09:43:09)
Dear Philipp, thank you very much for your feedback. We will take a look into it. Although it seems like you missed some things - please be advised that "Start Game" has an alternative flow as well. Regarding the "Loading File" - Flow within starting game, we are not sure if we are going to implement such - therefore we skipped it within the .feature-file. In the UseCase diagram we were asked to illustrate it no matter if we would go ahead for further implementation. Thanks, Sincerely, SGFA CCD (Customer Care Department)

playchessmate (2017-11-15 10:19:24)
Hi SGFA CCD team, great to hear again from you! Your feature files look fine to me. But one thing I've noticed is that you could include a link to the feature files in your UC specification or add a link to the picture to the feature files. Moreover, you could think about adding a description of what cucumber is and what it does for a better understanding for readers which aren't familiar with it. Cheers, Pascal - chessmate team

sgfaweb (2017-11-15 11:06:00)
Dear Pascal, thank you for your feedback! We will take a look into it - already working on it. Best regards, SGFA CCD (Customer Care Department)

torom97 (2017-11-15 10:24:33)
Hey SGFA-Team, I really like how structured your .feature files look and how organized your team works. Which IDE did you use to create the .feature files ? Is there a special reason why you have a scenario for simultaneous movement in your Feature: Move ? Best regards, Torom97 from TASP :)

sgfaweb (2017-11-15 11:11:52)
Dear Torom97, thank you for your comment. We used Visual Studio Code. We will talk about it in a future block-post, due to the fact that we are using it with Unity as well. Regarding Simultaneous Movement - it was really important to us to mention, that simultaneous control of the characters is something "special" in some environments. Taking JavaScript for example does not allow this kind of behavior from one keyboard out of the box. Hope we could clarify your concerns. Thank you very much, SGFA CCD (Customer Care Department)

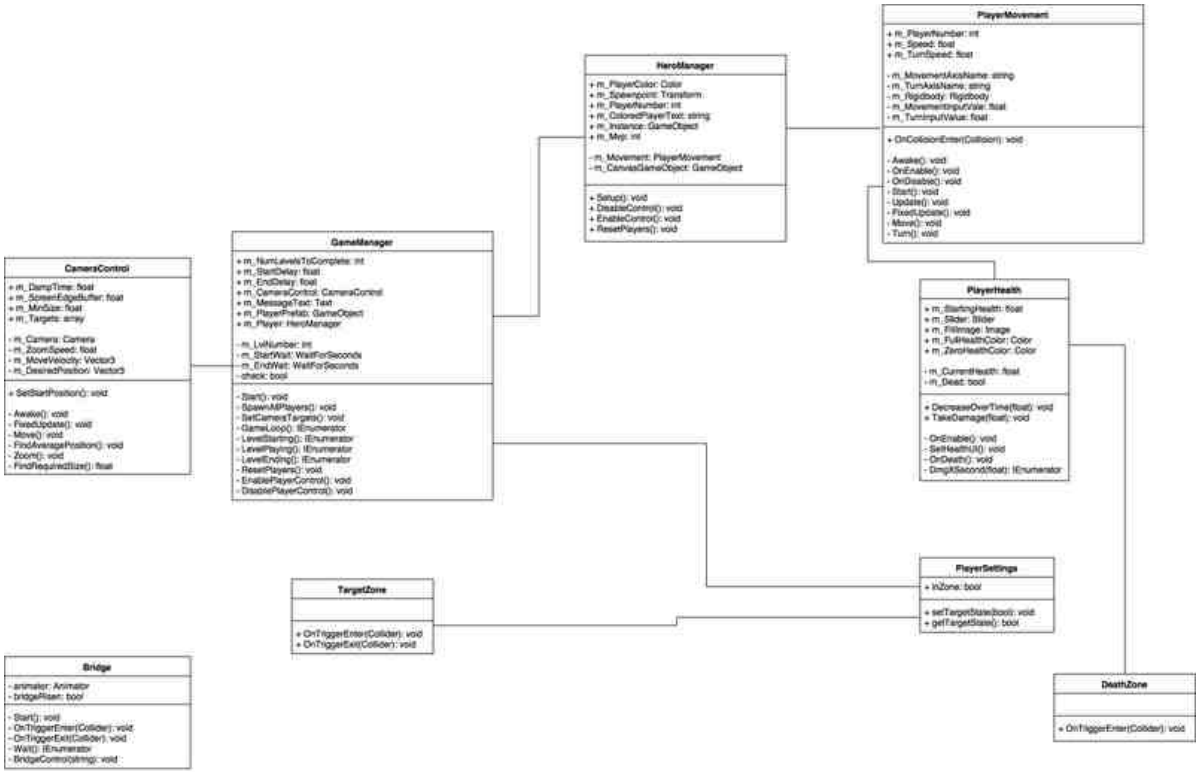
Midterm Summary – SGFA Productions (2017-12-13 17:09:53)
[…] Week 6: Feature Files […]

Week 7: Class Diagram (2017-11-21 22:58)

This week we would like to present to you our first Class Diagram.

Class Diagrams are, as you may know, pretty important to developers as well as to people, who want to understand some of the logic behind it.

Knowing which classes do exist and if they are connected to each other help a lot regarding this aspect.



Since WordPress automatically compresses images, we would suggest checking out our [1]GIT-Repository for better understanding.

General Information

Illustrated within the diagram are all of our classes. Though this might look a little bit confusing because of the lack of connection to the in-game aspects, it sums up the basic logic.

The GameManager controls the game phases as they pass. The script is able to differentiate between level-start, -play and -end and automatically blocks user controls. In addition to that it provides further HUD functionalities to let the user know, what is going on.

The HeroManager contains functionalities to enable and disable players as well as to reset them. Since there are at least two players on one keyboard, a script for managing both of them is necessary. As you might see,

GameManager and HeroManager are connected. Using the different functions of HeroManager, GameManager is able to take control of the players while switching phases.

Disabling players is pretty easy, having a separate script for their movement as well. PlayerMovement contains every single function to allow the player to move.

Since players should only be able to move when alive, a connection to PlayerHealth is needed. PlayerHealth provides the logic for the health system of our heroes. Therefore functions for taking health are implemented. Examinations, if players are still alive, and the update of the health UI itself can be found here as well.

DeathZones are used to restrict the moveable area. Falling from a platform should not be intended within our game. DeathZones immediately cause a lot of damage and, most of the time, also death to a player. A connection between DeathZone and PlayerHealth is therefore needed as well.

With the existence of zones, we implemented TargetZones within the level. With players have to be in the zone together, to end the level successfully.

Making use of PlayerSettings, TargetZone provides information, if a player is in the zone or has left it and sends it to the PlayerSettings.

PlayerSettings ultimately refers back to the GameManager and gives information on the state of the both players. If both players are in the zone together, the GameManager ends the play-phase and switches to level-completed.

As you might see in a future build, our camera system has its own logic - and therefore its own script. CameraControl is able to position the camera whenever a repositioning is needed. Since there are different game phases, the GameManager should have some kind of control over the camera settings as well.

Yet not connected to the rest of the logic is the Bridge. To reach the target zone of our first level, player will have to activate a bridge to get over a river. The logic behind the appearance is for now provided by the Bridge script.

Further Information

Although we are working on a Main-Menu and we already presented a working build to you last week, we are still experimenting on how to do it right. As long as we do not have a suitable solution for our problems and needs, we will not give any further information on the structure behind it, especially since it is experimental work.

What have we learned?

Creating this diagram helped us a lot understanding our own workflows better and seeing similarities between some of the functions. Different zones do or could do very similar actions and could be combined to one script at some point of development.

During our upcoming presentation on 22.11.2017 we will provide further information on this topic.

Surprise incoming...?

Since we have nearly reached a state in which we have the basic functionalities implemented and could need some feedback, we are working really hard on a Alpha-Build for you to test on Linux, Mac & Windows.

Subscribe now and help us making this game better!

1. https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/SAD.md

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NAP-Team (2017-11-22 09:48:13)
Hello Souls Gathering Team, your blog entry is really good. The class diagram fulfills the UML criteria. I like that you did not only upload the picture of the class diagramm but also explained what your classes do. There is nothing I could criticise. Keep up this good work. Im really looking forward to trying out your Alpha. Kind regards, the NAP-Team

sgfaweb (2017-11-22 09:59:51)
Dear NAP-Team, thank you very much for your comment. We appreciated it! Keep eyes open for another post for further information on the Alpha. Best regards, SGFA CCD (Customer Care Department)

wgplanerblog (2017-11-22 09:48:47)
Hi SGFA team, nice to hear from you again. Your class diagram looks very nice and is easy to understand. I like your idea of explaining the role of every class in your blogpost. I'm waiting wishful for your first build to test it out! Best regards Arne

sgfaweb (2017-11-22 10:01:48)
Dear Arne, thank you very much for your kind feedback. Within the next week there will be another blogpost for further information on the Alpha-Test, so stay tuned! Best regards, Your SGFA CCD (Customer Care Department)

Midterm Summary – SGFA Productions (2017-12-13 17:09:56)
[…] Week 7: Class Diagram […]

Roadmap SEM2 – SGFA Productions (2018-03-04 17:11:55)
[…] Regarding the general game experience, more levels must be build. This leads to an adaption of the existing Game Manager as described here. […]

Week 8: Architecture (2017-11-28 20:46)

This week we would like to present to you our [1]Software Architecture Document.

It provides some details regarding how we use Unity as a Framework.

In addition to that we would like to present to you our first [2]Pre-Alpha Build. We would be really happy if you would give us some feedback on it, using this [3]Forum.

Known Bugs

- Health HUD disappears while moving over higher ground
- Bridge-Animation triggers sometimes unintended

Thank you very much!

1. https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/SAD.md
2. https://sgfaweb.wordpress.com/downloads/
3. http://sgfa.freeforums.net/thread/2/feedback-pre-alpha-29-2017

This week we would like to present to you our Software Architecture Document.

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wgplanerblog (2017-11-29 09:54:07)
Hi sgfa, pretty nice work at all, but it looks like you have forgotten to link your MVC-Pattern to your Software Architecture Document. I would recommend you to add this so that your followers can understand how your Models interact with your Views. Thank you and best regards Arne (WGPlaner team)

sgfaweb (2017-11-29 09:59:19)
Dear Arne, as you might have noticed, we mentioned, that we do not have MVC. Unity uses a variation, which is in some ways similar to it. Nevertheless, it is Component Architecture. A diagram for further explanation on how Component Architecture basically works is linked as well. Feel free to ask further questions, if anything is still unclear. Thank you very much. Sincerely, Your SGFA CCD (Customer Care Department)

NAP-Team (2017-11-29 10:30:31)
Hello SGFA-Team, your SAD looks good so far, although I noticed one tiny little spelling mistake in the section "Size and Performance", where you wrote "Prticles". Aside from that, I'm looking forward to your demo! Greetings NAP

sgfaweb (2017-11-29 11:52:47)
Thank you very much for this hint. We will correct it. Sincerely, Your SGFA CCD (Customer Care Department)

FlyMusic Team (2017-11-29 10:32:21)
Hi SGFA, it seems that your deployment view is missing. Besides of that your SAD looks correct to me. Kind regards, FlyMusic Team

Midterm Summary – SGFA Productions (2017-12-13 17:09:59)
[…] Week 8: Architecture […]

1.3 December

Feedback (2017-12-01 13:36)

For all our followers, we have great news!

Talking directly to developers, providing feedback as well as suggesting new ideas for the project is really important to us.

Therefore we are really happy to present to you our new [1]forum.

Any kind of feedback, suggestions and bug reporting will be managed through it - so do not miss a single thing and join us now on our journey, help us to get the best out of the game.

Please note: since we have created the forum recently, its layout and structure is not final and may change.

Thank you very much,

Your SGFA CCD (Customer Care Department)

1. `http://sgfa.freeforums.net/thread/2/feedback-pre-alpha-29-2017`

Midterm Summary – SGFA Productions (2017-12-13 17:10:14)
[…] Feedback […]

Final Presentation – SGFA Productions (2018-07-01 13:17:42)
[…] Feedback […]

Week 9: Gantt-Chart (2017-12-03 12:10)

This week we tried to create a Gantt-Chart with our project-management tool TargetProcess.

Unfortunately TargetProcess does not support Gantt-Charts at the moment. That is why we created a [1]Timeline as workaround.

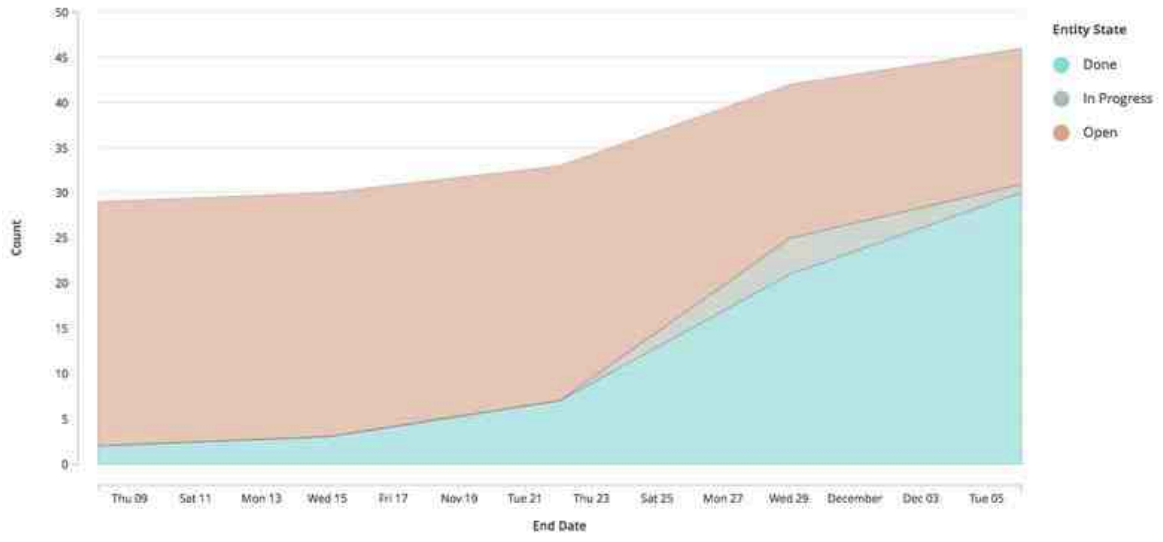
This timeline provides the different tasks grouped by the RUP Workflow - just as a Gantt-Chart would.

Missing are the Phases: Inception, Elaboration, Construction and Transition. Therefore we provide additional information:

- Inception: week 1 - week 4
- Elaboration: Week 5 - Week 10
  - Week 10 = Midterm, after Midterm we will start construction phase
- Construction: Week 11 and following
- Transition: open

In general, Business-Modeling and Requirements are not displayed within the Timeline, since we had to setup TargetProcess properly during this period of time.

As asked by Followers, we also created a Cumulative Flow Chart. For some reasons TP does not allow sharing the link open for all. Below you will find a Screenshot of the Chart.



Please note: Due to the fact, that TP does not have a built-in support for Gantt-Charts yet, we do not recommend using it for business-orientated users.

1. `https://tauboard.com/v/7a044d8513aac732d44574ac32cb71cd`

This week we would like to present to you our Gantt-Chart.

visualracing (2017-12-05 15:56:56)
Hey SGFA, nice to see the project management part of your project proceeding. I really like how much additional information you provided in order to understand what's going on :) I'm just not sure what to get from the timeline other than how many tasks belong to which RUP-phase… But for that purpose a cumulative flow chart may be nicer and easier to understand. Is it possible to create one with TargetProcess? Kind regards, VisualRacing

sgfaweb (2017-12-06 09:36:32)
Dear VisualRacing, thank you for providing additional feedback on our post. The timeline is used to illustrate nearly the same things as a Gantt-Chart would. Therefore it is separated into the RUP phases and different tasks. Using a cumulative chart within TargetProcess, all tasks are munged together, so that a separation is no longer possible. In addition to that, further options for setting the grouping to the RUP system is not possible as well. Instead it groups all tasks belonging to its state. Nevertheless, we have created one. You can find the link in the Blogpost below now. Thank you very much, Your SGFA CCD (Customer Care Department)

FlyMusic Team (2017-12-06 09:47:13)
Hi SGFA, thanks for the suggestion not to use TargetProcess :) It's nice that you searched for another tool in order to show your task timeline. So no complaints from that side. Kind regards, FlyMusic

sgfaweb (2017-12-06 10:02:30)
Dear FlyMusic, it seems we did not make this clear enough - we used TP for creating everything we posted. We did not use another tool, so that we were able to test how close we could get to a proper solution. Best regards, SGFA CCD (Customer Care Department)

Midterm Summary – SGFA Productions (2017-12-13 17:10:02)
[…] Week 9: Gantt-Chart […]

Final Presentation – SGFA Productions (2018-07-01 13:17:27)
[…] Week 9: Gantt-Chart […]

New Build (2017-12-06 10:16)

We are really happy to present to you our latest build.

It contains the first draft of our real hero-models. This should fix the problems with the controls (since you know now, where the front of the hero actually is).

In addition to that we implemented a Main-Menu. You can start and quit the application from there. Furthermore you are able to reach the Main-Menu from the level by clicking Escape (ESC).

You can find the build [1]here.

Please provide feedback on your experience using the [2]Forum.

Thank you very much for your support.

Sincerely, SGFA CCD (Customer Care Department)

1. `https://drive.google.com/drive/folders/1sclgVLNY4nY7oqoz7wixnmeWNy04veRp`
2. `http://sgfa.freeforums.net/thread/5/feedback-pre-alpha-06-2017`

New builds are ready to be downloaded!

Midterm Summary – SGFA Productions (2017-12-13 17:10:18)
[...] New Build [...]

Final Presentation – SGFA Productions (2018-07-01 13:17:44)
[...] New Build [...]

TargetProcess (2017-12-11 15:23)

Working on a project, no matter what the topic is, planning is one of the most important things to do. Developing without any pre-defined goals is irresponsible towards the team as well as towards the community.

Many projects failed development because of bad planning. This is why more and more project-management tools pop-up to avoide any kind of missing information and planning.

Our decision: [1]TargetProcess

General

TargetProcess is a free online-tool which allows users to create boards, timelines and provides many more visualization possibilities for structured and well-organized planning.

Sharing boards with non-registered users is very easy, since TP allows you to do that immediately from the board itself - automatically creating a new link for you to share.

Reports, like a BurnDown-Chart, are created within minutes and are in addition to that pretty easy to manage afterwards. Simply assign a task or use case, spend time on it and the BurnDown automatically updates itself.

Although our team is working with Unity, TP has several Integrations with different development tools such as GitHub and VisualStudio, making it even easier to update your tasks. After setting up the belonging dependencies between both platforms, pushing updates via GitHub and providing additional information on the Task-ID for TP allows an easy and user-friendly way of keeping your TP-Documentation and /-work up to date.

Positives

After our Team has spent some time with TP, it felt very easy to use. Creating new use cases, sprints or charts is done within a short period of time and thanks to the integration with platforms like GitHub, you do not have to enter spent time or additional comments manually. Pushing with phrases like " #", "time:", "comment:" or "state:" in the comments automatically enters the information within TP and saves the source-code of the push in addition to that.

Sharing of charts via an individual link is easy as well. A great thing is that every change you make after you originally shared the board, is updated within the share-link, so that it is always up to date.

Something truly special we realized was how good Gantt-Charts could be build. Therefore our team simply used a timeline and modified the axis - in direct comparison to other tools like YouTrack this worked really fine.

Even if we have not used it yet, TP provides a LiveChat to help you with your questions.

Negatives

First working with TP, our team did not really know what to do with it - especially how to do something was pretty unclear. Maybe this was only because of authorization-restrictions we first had, which caused restrictions in important areas such as BurnDown-, CumulativeFlowChart or use case-creation.

Conclusion

Summing up, we would recommend using TargetProcess, as long as there is a person which guides you through the start of the use of TP.

1. `https://www.targetprocess.com/`

A conclusion on our project-management tool.

Midterm Summary – SGFA Productions (2017-12-13 17:10:21)
[...] TargetProcess [...]

Final Presentation – SGFA Productions (2018-07-01 13:17:13)
[...] are using TargetProcess (TP) as our Project Management Tool (related Blogpost). Making use of this tool, we have to create UseCases to be able to create tasks. This means [...]

Midterm Summary (2017-12-13 17:09)

In this blog post you will find all the work we have done within the first SE-semester.

Links to every homework

[1]Week 1: Vision

[2]Week 2: Team & Technology

[3]Week 3: SRS

[4]Week 4: UC

[5]Week 5: Scrumming

[6]Week 6: Feature Files

[7]Week 7: Class Diagram

[8]Week 8: Architecture

[9]Week 9: Gantt-Chart

Additional Posts

[10]Legal Announcement

[11]Project Future

[12]Story

[13]Feedback

[14]New Build

[15]TargetProcess

Midterm-Build available for Windows, Linux and Mac [16]here.

Feedback is very appreciated and can be submitted [17]here.

Midterm-Presentation available as PDF: [18]SGFA _MidTerm

Code & further documentation as well as Assets can be found on [19]GitHub.

1. https://sgfaweb.wordpress.com/2017/10/08/vision/
2. https://sgfaweb.wordpress.com/2017/10/11/team-technology/
3. https://sgfaweb.wordpress.com/2017/10/22/srs/
4. https://sgfaweb.wordpress.com/2017/10/30/week-4-uc/
5. https://sgfaweb.wordpress.com/2017/11/07/week-5-scrumming/
6. https://sgfaweb.wordpress.com/2017/11/13/week-6-feature-files/
7. https://sgfaweb.wordpress.com/2017/11/21/week-7-class-diagram/
8. https://sgfaweb.wordpress.com/2017/11/28/week-8-architecture/
9. https://sgfaweb.wordpress.com/2017/12/03/gantt-chart/
10. https://sgfaweb.wordpress.com/2017/10/04/erster-blogbeitrag/
11. https://sgfaweb.wordpress.com/2017/10/09/project-announcement/
12. https://sgfaweb.wordpress.com/2017/10/16/story/
13. https://sgfaweb.wordpress.com/2017/12/01/feedback/
14. https://sgfaweb.wordpress.com/2017/12/06/new-build/
15. https://sgfaweb.wordpress.com/2017/12/11/targetprocess/
16. https://drive.google.com/drive/folders/1F22uc8Yw9ofsF4QC105nz3eiCMu1So_L
17. http://sgfa.freeforums.net/
18. https://sgfaweb.files.wordpress.com/2017/12/sgfa_midterm.pdf
19. https://github.com/joachim747/SGFA

Summary of our completed work - so far.

Final Presentation – SGFA Productions (2018-07-01 13:17:55)
[…] Blogpost Midterm: Midterm Summary […]

2. 2018

2.1 March

Roadmap SEM2 (2018-03-04 17:11)

Within the vacation, development on SGFA has stopped. Now that the second semester of SE is just a few weeks away, we are happy to present to you our Roadmap, which features our next steps for the game, we want to implement.

The roadmap itself is subdivided into the following main topics.

Models / Environment

It is obviously necessary to create new models. Therefore normal base blocks will be build, allowing us to introduce new seasons to our game and explore new environments like deserts and snowy ice worlds. Furthermore the base blocks might differentiate from one another, to allow a much more interesting level-design.

Characters and villains (more infos to come) must be newly designed as well.

Animations

Making the game more alive, more animations must be designed. Not only for upcoming abilities (more infos to come) or the overall player movement, but especially for different seasons and therefore weather conditions. Rain, a snow or desert storm, nearly everything is possible.

Abilities

Players should be capable of using more than one special ability. These must be defined, implemented and well tested, if they really fit into the game as expected. More infos to come.

Game

Regarding the general game experience, more levels must be build. This leads to an adaption of the existing Game Manager as described [1]here.

Already teased, a Level Selection would be helpful. The UI as well as the logic behind it has to be implemented.

Also yet missing is an **Ingame Menu** and the possibility to change some Settings as a User.

From a gamer point of view, AI as well as a Bossfight should exist as well and are planned with high priority for this semester.

Development, Team & Technologies

Since we have the basic logic of the game created in Unity and tested out its capacity and workflow, it does not make much sense to change the game engine at this point. So we will keep on working with Unity.

TargetProcess will stay as our Project Management Tool as well, since we now know how to work with it properly.

Please check [2]the updated UseCase-Diagram.

The team stays the same, as further described in [3]Week 2: Team & Technology.

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Let us know your thoughts via the [4]forum or in the comments below!

Your SGFA CCD (Customer Care Department)

1. `https://sgfaweb.wordpress.com/2017/11/21/week-7-class-diagram/`
2. `https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/UseCaseDiagram.png`
3. `https://sgfaweb.wordpress.com/2017/10/11/team-technology/`
4. `http://sgfa.freeforums.net/`

A short overview of the roadmap regarding the upcoming development start.

Final Presentation – SGFA Productions (2018-07-01 13:17:46)
[…] Roadmap SEM2 […]

2.2 April

Scope & Risk (2018-04-09 13:58)

This week we discussed risks during development, their probability of occurrence as well as their possible influence on the project.

[1]Time- / Risk-Management

=> Checkout our [2]Time Estimation & Function Points BlogPost for information on the FPs.

Please note: additional information on the spent time per UC is provided as well.

Please take a look at our updated [3]Overall-Usecase-Diagram (OUCD) as well, to get to now our new Scope for this second semester.

Please note: *creating new in game environments, music, models, levels, [...] does still not belong to the OUCD.*

Feel free to comment below!

Your SGFA CCD (Customer Care Department)

1. https://sgfaweb.files.wordpress.com/2018/04/se1.pdf
2. https://sgfaweb.wordpress.com/2018/04/23/time-estimation-function-points/
3. https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/UseCaseDiagram.png

Take a look at our Time and Risk Management!

Andre Meyering (2018-04-09 14:21:38)
Hey Team, glad to hear from you again: :) Just a few notes on your time/risk management: - was the Time Management chart automatically generated? - could you add a legend or tell me what the numbers mean? What column is in %/h or on a scale from 1 to 10? - I would rephrase the row "Performance" in your risk management, like "A new build makes the application slower" or something like that - I'm not familiar with what you mean by "Create Environment 1" in your time management? What environment do your mean? Regards, Andre

sgfaweb (2018-04-09 22:36:45)
Dear Andre, thanks for your feedback, we appreciate it a lot! Regarding Your points, we have following answers for you: - the table within the PDF has not been created automatically. It has been created with numbers, as well as the risk management table - we will add a legend, thanks for that –> we will notify you once it is done. - we will look into it, thanks for the suggestion - Create Environment 1 is, as described by the header of the column, a UC further described by our project management tool TargetProcess. Within the UC, new models, characters, animations and overall assets have been created for the game. Hopefully we could clarify most of your points. Thank you very much, Sincerely, Your SGFA CCD (Customer Care Department)

(2018-04-13 09:19:38)
Hey SGFA Team, nice to hear from you again! Your risk management table looks nice and very detailed. Besides the points that Andre has already mentioned, I've no questions concerning this one. When looking at you time management table, I wonder what the orange marked items are. I assume that you were not able to track the time of these tasks, because your

tools were not set up yet. Also, the time you've spent on documentation seems to be very short. I'm looking forward to see your updated OUCD next week! Best, FlyMusic

sgfaweb (2018-04-13 15:24:37)
Dear FlyMusic-Team, thanks for your Comment on our Blogpost, we really appreciate it. Regarding your worries on our Time Management Table: the orange marked items are Usecases, which have not been in scope for the first semester and therefore have not been worked on. In general, all Usecases have been tracked correctly via Targetprocess and have therefore valid information. Time on documentation is indeed, compared to the time needed for coding, short. Nevertheless, within 9h it is easy to create a lot of documentation, as long as there are clear guidelines what to document and how. Using the information provided with the lectures, it was pretty clear what to document, how detailed it had to be and how to structure it. We will try to keep it that way, so that more time can be spend on implementation and design of the game itself. Hopefully we could clarify any confusions, Sincerely, Your SGFA CCD (Customer Care Department)

Time Estimation & Function Points (2018-04-23 08:31)

If you're working on a big project like Souls Gathering: First Alliance, you will have to find out how long it will take to finish the product or at least get an acceptable result. That is why we worked on calculating function points and matching them to our spent time in the past.

By calculating the function points for the upcoming use cases we can give a good prediction on how long we will need for the single use cases. In this [1]spreadsheet you can find details on how we calculated the function points for the single use cases.

Unfortunately the common methods for calculating function points like the [2]Tiny Tools from Harvey Roy Divinagracia didn't work for games and so we had to create our own formula. It is also pretty hard to unify everything in the creation process of a game so we split our use cases in graphical use cases and coding related use cases. The graphical use cases describe the creation of 3D models, their texturing and the animation. Coding related use cases contain coding the main menu and writing the scripts for the behavior of our in-game world.

We applied the function point calculation to the already finished use cases and combined it with the time spent to get an idea of how long other use cases with similar amounts of function points would need.

Summing up we have to come to the conclusion, that creating function points for a game is nearly impossible. In fact, there is not really a reliable metric, which could be applied, especially since games are slightly more psychotic than other software developments. Therefore estimating time for upcoming UCs is, from a coding point of view, not truly applicable (please follow the above link and take a look at the chart for the Coding-related UCs for better understanding of this problem).

Feel free to comment below!

Best regards

Your SGFA CCD (Customer Care Department)

1. `https://docs.google.com/spreadsheets/d/16bN6iqE1kUOublT89UNWeLBumtjJIcAuC32D5QTfd50/edit?usp=sharing`
2. `http://groups.umd.umich.edu/cis/course.des/cis525/js/f00/harvey/FP_Calc.html`

Overview of our take on function points.

FlyMusic (2018-04-23 08:54:07)
Hi SGFAweb Team Thanks for your blog post! Its very interesting to see the function point metrics working (or better not working) an a game-developing project. It is nice that you have tried to apply the pattern to your project, even if it seems to be very difficult to do this. Thanks for your hard work. Also, your explanation is very comprehensibly. One thing that I think it would be interesting to see: In the calculation f the graphical UCs, the distribution of the points seems to be linear. Maybe you could Add the trendline here and visualize the new UCs. Best, FlyMusic

sgfaweb (2018-04-23 09:10:32)
Dear FlyMusic, thank you very much for your comment! We added this view. Best regards, SGFA CCD (Customer Care Department)

kleopi (2018-04-23 09:05:03)
Hey guys, very interesting to see a different approach, I see your point there. In your sheet I realized that some basic trend lines are missing, also you have a 125/1 point in there which seems a bit odd. Is there a reason for this? All in all, I hope your system works out! Cheers SheeshApp-Team

sgfaweb (2018-04-23 09:18:21)
Dear SheeshApp-Team, we adjusted the diagram - unfortunately we have had a mistake within our graph. Thank you very much for pointing this out to us. Sincerely, SGFA CCD (Customer Care Department)

Scope Risk – SGFA Productions (2018-06-14 15:17:56)
[...] Checkout our Time Estimation & Function Points BlogPost for information on the [...]

Final Presentation – SGFA Productions (2018-07-01 13:17:29)
[...] Time Estimation & Function Points [...]

2.3 May

Unit Testing (2018-05-04 09:21)

"In computer programming, **unit testing** is a software testing method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for use." - Wikipedia

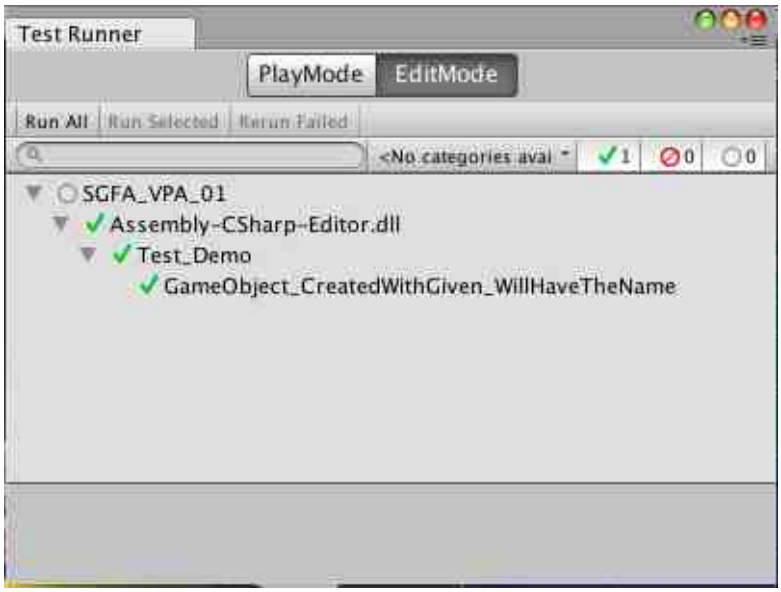
Unity provides its own Test-Tools, allowing the developers to test their game directly in the engine and explore any possible occurring problems.

Check out our [1]Testplan (currently PDF, will be transformed to MarkDown soon).

Since we just started working with the Unity Test Tools and have to do some more research on it, we focused on a basic functionality to be tested. Therefore we check after the creation of an object, if the depending name is saved and assigned properly to it.

You can find our Testcodes right [2]here.

Executing a test within Unity delivers the following result:



Feel free to comment below!

1. https://sgfaweb.files.wordpress.com/2018/05/sgfa_testplan1.pdf
2. https://github.com/joachim747/SGFA/tree/master/SGFA_VPA_01/Assets/Editor

Explore how we applied Unit-Tests within Unity

FlyMusic (2018-05-04 09:36:37)
Hey SGFA, nice blog post, your testplan already looks quite good! But it would be nice hearing something about your CI,

especially in the context of game development! Best, FlyMusic

sgfaweb (2018-05-04 10:56:56)
Dear FlyMusic, thanks for your feedback. We will create an extra BlogPost on our TravisCI solution once we have set it up properly. We appreciate your interest! Best regards, SGFA CCD (Customer Care Department)

NAP-Team (2018-05-04 09:51:52)
Hello SGFA-Team, nice to see the progress in your project. Your test plan looks good. Although it is a bit empty, since you only have unit tests, this seems to be the only usefull tests when working with unity (we don't have other tests eather). In your document you are mentioning TravisCI as your CI tool. Did you manage to let this tool run your tests and give a feedback to you? Also, did you find any tool to calculate your code coverage, which would be good for checking your test goals? Kind regards, the NAP-Team

sgfaweb (2018-05-04 10:59:55)
Dear NAP-Team, that is true, the Test Plan might look a bit empty - but as you have already mentioned, this is due to the fact that we have to test our project using the Unity Test Tools as you do. Therefore most things are not as applicable as we hoped they would be. We are currently working on the TravisCI Integration and making good progress. We will create an extra Blogpost on it, once it is fully working - So keep your eyes open! Best regards, SGFA CCD (Customer Care Department)

Final Presentation – SGFA Productions (2018-07-01 13:17:23)
[...] Blogpost: Unit Testing [...]

There is more... (2018-05-04 11:12)

We worked really hard to develop a new build with new improvements, features and levels to explore.

Please follow [1]this link to download the new Build. Provide Feedback or take a look at the known issues via the [2]Forum.

Features in this Build

- Metal Support for Mac (runs much smoother now)
- Music in the game, including the menu and all playable levels
- Reworked MainMenu
  - Changed Environment & Transitions
  - Working Levelselection
  - Working Settings
    - change between Fullscreen and windowed
    - change Graphics (Low, Medium, High, Ultra)
    - adjust Master-Volume
  - It is now possible to reach the Forum as well as the Blog
- New PauseMenu
  - Decide directly in a level whether you just want to pause / resume it, go back to the MainMenu or quit the application completely
- 2 new fully playable Levels
- 1 Demo Level
- 1 new ability for the devil
- New Models and Animations
- Adjustment on the Gamemanager to work as a Levelmanager
  - shows general information to the user which might be relevant for the level
- First steps on interaction between the environment and the players
  - Human survivors talk to players

We can not wait for the upcoming weeks to present to you more and more new content.

Feel free to comment below or leave feedback in the [3]Forum!

Your SGFA CCD (Customer Care Department)

1. `https://drive.google.com/drive/u/1/folders/1ZduQPPigTG-lR_bQ5PCAzlV4CGyB4Ofd`
2. `http://sgfa.freeforums.net/`
3. `http://sgfa.freeforums.net/`

Another Build is ready to be tested - by you!

Final Presentation – SGFA Productions (2018-07-01 13:17:48)
[…] There is more… […]

Refactoring (2018-05-14 06:43)

Within our class, we discussed [1]Refactoring. To get an even better understanding of the technique itself, we tried to refactor an existing project by ourselves. Take a look at the following Repositories to see how we did it.

- [2]Florian

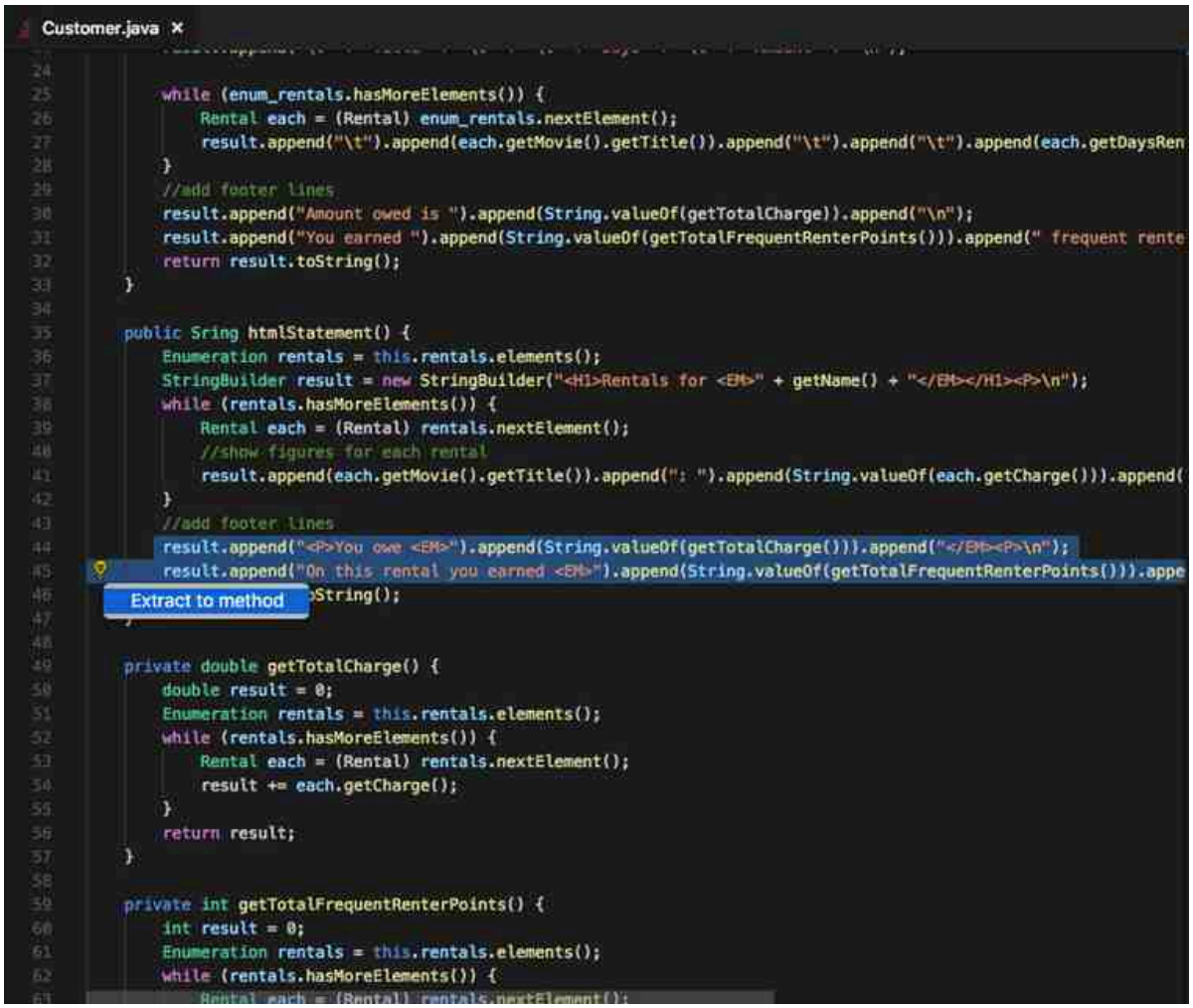
- [3]Leon

Does our IDE help us with Refactoring ?

Since we are using Unity for development, the coding part could either be implemented using MonoDevelopment or Visual Studio Code. As mentioned in an earlier Blog-Post, we decided to make use of Visual Studio Code because of its simplicity and easy to add functionality possibilities.

Visual Studio Code supports Refactoring in some ways. Extracting variables and methods is done with a click. Furthermore there are some OpenSource Libraries, allowing even more assistance on Refactoring.

Within our refactoring process we experienced, that extracting methods and variables is important. Therefore Visual Studio Code assists us quite good. Simply mark the part of code you want to have extracted, click on the light bulb and Visual Studio Code will give you the possibility to do that just by a mouse click.



Please take a look at [4]the official documentation for further information.

Feel free to comment below!

1. `https://refactoring.com/`
2. `https://github.com/joachim747/SE_WK5_Refactoring`
3. `https://github.com/futzjug/SE_2018_Refactoring/commits/master`
4. `https://code.visualstudio.com/docs/editor/refactoring`

Our take on the overall refactoring process

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wgplanerblog (2018-05-14 08:44:49)
Hi sgfa-team, thank you for keeping us up to date! I took a quick look on each projects commit history and I think it looks like you have done everything as needed. The part about your IDE is a pretty nice, general overview about how you use IDE's and what tools they provide for refactoring. But I think you should consider to present one tool of your IDE which is important for you and helped you with your refactoring task. Kind regards Arne

sgfaweb (2018-05-14 08:58:49)
Dear Arne, thanks for your feedback. We made the requested changes to our blogpost. Sincerely, SGFA CCD (Customer Care Department)

kleopi (2018-05-14 09:23:48)
Hey Team, with having a few dozen commits you guys got a lot of refactoring done. With you I realized one of you converted the response into an HTML response, where I'm not sure if it was intended by the original author. Good to see the previous comment issue resolved too, it's very nice to have an example there. Altogether, nice work! Cheers, SheeshAppTeam

NAP-Team (2018-05-14 09:26:42)
Hello SGFA-Team Thank you for keeping us updated on your progress! Have you used codacy to review your code? If you did, you should consider adding the corresponding badge to the README.md of your repository. If you have not used codacy yet, you should consider doing so! It is really easy to set up and gives you a nice overview of your code quality. Best regards, Nikolas, NAP-Team.

sgfaweb (2018-05-14 09:54:56)
Dear Nikolas from NAP-Team, thanks for your very appreciated feedback. Changes have been made to the repositories, feel free to check it out! Best regards, SGFA CCD (Customer Care Department)

Patterns (2018-05-28 09:00)

Designing software is hard. So making use of solutions that have worked before allows developers to be more productive and the results to be more flexible and also reusable.

As you know, we are developing a game using the Unity Engine. Therefore we implement the logic using C # as well as the Unity Framework based on the standard Unity specific patterns.

Within Unity, nearly everything is event based. Since we wanted to experience something new, we tried to apply the [1]Observer pattern into our project. Therefore we used the book "Design Patterns für die Spieleprogrammierung" by Robert Nystrom.

The observer pattern basically "observes" the behavior of an subject / object in the game. If something related to the object happens, the observer gets notified by it to provide the information which might be changed in the object itself in the observer instead. Therefore, changing the initial object, is no longer necessary.

Therefore we applied the observer-logic to our bridge. We get notified if the bridge changes its states. This is really necessary since we need to know, if the bridge is risen or not, to later control the moveable areas for the AI.

We realized this using normal C # scripts, putting the files in an extra folder. Since Unity does not have any preferences where to save the files, we could easily move them to somewhere else, if we would expand this logic and generalize it.

After working with the observer, we gotta say, that we most likely won't use it in this way. Since Unity provides a component based architecture, it is really easy to check specific conditions without using a dedicated observer. Furthermore, in regards to the changing moveable area for the AI, we will use the Dynamic Navigation Mesh provided by Unity itself.

If you want to check our work, please take a look at the folders contained in the [2]Creative and Modeling Branch on GitHub.

Feel free to comment below!

1. `https://en.wikipedia.org/wiki/Observer_pattern`
2. `https://github.com/joachim747/SGFA/tree/CreativeAndModelling/SGFA_VPA_01/Assets/Scripts/Environment`

Get an insight on how we are using design patterns.

NAP-Team (2018-05-28 09:17:10)
Hello SGFA-Team, thank you for keeping us updated! Your summary of the Observer-Pattern is looking good. We are using Unity as well, so it is nice to have a well-written summary on this pattern. Your blog entry does not include a class diagram or a link to a C #-Script implementing this pattern. This is probably because you are unlikely to use this pattern in your game, so i am not going to criticize that. However, it would be nice to have an example how this pattern can be used. Best Regards, Nikolas Traut, NAP-Team.

sgfaweb (2018-05-28 09:23:29)
Dear Nikolas from NAP-Team, thanks for your very appreciated feedback. We adjusted the link to navigate you directly to the C # scripts we have created for this pattern. We have implemented such, but maybe missed to point that out in the post itself, so thanks for this hint. Regarding your feedback on the missing class diagram, we did not include it since we decided not to further work with this pattern and therefore do not have changes on the class diagram. Best regards,

Sincerely, Your SGFA CCD (Customer Care Department)

sheeshapp (2018-05-28 09:20:28)
Hello SGFA, I am happy to see your progress. In my opinion, the observer logic sounds great and I already understood how it works after your explanation. I also think, that this is a great pattern for games! The only thing I'm missing is your class diagram. SheeshApp

sgfaweb (2018-05-28 09:24:44)
Dear SheeshApp, thanks for your feedback! Please take a look at the comment above for further explanation on the missing class diagram. Best regards, Your SGFA CCD (Customer Care Department)

rendlju (2018-05-28 09:21:15)
Hi guys, great to hear from you again. Using the Observer pattern is a great idea. Despite my poor c # and unity skills I think you implemented that pattern properly. Best Regards, Julian (chessmate-team)

sgfaweb (2018-05-28 09:25:47)
Dear Julian from Chessmate-Team, thanks for your feedback. Best regards, Your SGFA CCD (Customer Care Department)

Final Presentation – SGFA Productions (2018-07-01 13:17:37)
[…] Related Blogpost: Patterns […]

2.4 June

Metrics (2018-06-04 10:30)

This week we focused on [1]Metrics.

Metrics with Unity are not that easy to analyze. By using the Unity framework you will be forced to create MonoBehaviours unless you are working with some kind of experimental [2]Entity Component System. Therefore normal programming styles don't apply and metrics analyzation often yields very bad results.

In addition to that the whole Unity Framework code will be analyzed too. With such a complex and refined Framework, the complexity levels rise to the top.

To get some reliable metrics, we first wanted to use visual Studio, which has a built-in metrics analyzer. Unfortunately this method crashed every time we wanted to check our code.

The tool [3]Gendarme for Unity didn't work either, it kept crashing on start and had no reliable error message.

With these two failed attempts to get Metrics up and running, we decided to get a Codacy badge on our GitHub Repository. The tools mentioned before are tools on your local pc and wouldn't be able to check the code after every commit. Codacy on the other hand is able to check things online and therefore is one of the easiest methods to get some metrics for the project.

Unfortunately the common coding style in the C # MonoBehaviour scripts isnt the way Codacy wants you to code. You will get error messages for public fields, which are used to view member variables in the inspector of unity. The Unity Framework code also produces some issues when checking it with Codacy, so don't expect good grades when checking your Unity code with Codacy.

As always feel free to comment below!

Your SGFA CCD (Customer Care Department)

1. https://en.wikipedia.org/wiki/Software_metric
2. https://github.com/Unity-Technologies/EntityComponentSystemSamples/blob/master/Documentation/index.md
3. https://forum.unity.com/threads/gendarme-for-unity-a-code-analysis-tool.112552/

Check out how we worked with metrics.

VisualRacing-Team (2018-06-04 11:04:05)
Hi SGFA-Team, it's nice to see you thinking about your code quality, style and complexity, that's always a good and important step. Thus it is real pity that the tools could not work for you. With Gendarme for Unity you would have a good analytics tool for Unity, but I think there are several other tool on the market that could handle c # and are able to calculate some nice metrics for your code. (even if there would be no integration in your deployment too). Additionally it would be nice if you could add a link to your Codacy Batch / Git Repo to your post. In general your post is written very well and it's clearly visible that you invest much effort into getting the tools run. Best regards VisualRacing-Team

FlyMusic (2018-06-05 09:04:22)
Hey SGFA- Team, thanks for the blog post! Although applying all the patterns and tools on you game project seems to be quite disappointing at most of the time, its good to see that you always try to and get an suitable result. Also, you well written blog post will help people with the same problems in the future! Well done! Best, FlyMusic

dhpoly (2018-06-05 09:07:56)
Hi guys, we think it is very unfortunate None of your choices of tools could be worked around and used. But furthermore it is quite amusing that even you, using Unity, utilize Codacy. Although the result is not as satisfying as it would probably be with one of your wanted Tools…. Can you maybe provide a Picture of an example showing, how Codacy wants you to code and how you are coding because of Unity? How many issues do you have due to the use of both, Unity and Codacy, that are not real errors? Best regards, DHPoly-Team

Final Presentation – SGFA Productions (2018-07-01 13:17:36)
[…] Metrics […]

E-Portfolios (2018-06-04 11:12)

Following the links down below you can find all the resources we used for our E-Portfolios on June 04 2018.

- [1]Leon (Blender)
- [2]Flo (Unity3D)

Feel free to comment below!

1. `https://github.com/futzjug/Blender-E-Portfolio`
2. `https://github.com/joachim747/Unity-Presentation`

Take a look at our E-Portfolios

Final Presentation – SGFA Productions (2018-07-01 13:17:49)
[…] E-Portfolios […]

Demo Build (2018-06-04 14:35)

We are happy to present to you another Build of SGFA.

Download the Build [1]right here (link will be provided tomorrow). Provide Feedback using the [2]forum.

Features

- **2 new Levels with** AI Enemies
  - Unlocked Level 4 & 5
  - Fight against Enemies to finish the level
- New Ability Angel
  - Angel is now able to heal himself as well as his ally, if in range.
- New Menu Page
  - Player is now able to take a look at the Game-Controls directly from the Main Menu
- Fixes and Improvements
  - Added Boundaries to stop players from moving to far off from the level
  - Changed the "Out of World" behavior regarding the damage-taking
    - now linear and stops, when getting back in the playable zone
  - Adjusted the devil behavior "Attack"
    - works now permanently and is more fluent

Check out the [3]forum for known issues and bugs.

Feel free to comment below!

1. `https://drive.google.com/drive/folders/1lC9OaMtc15n8Qr3CYB9qr9Xiw8YE_TPD?usp=sharing`
2. `http://sgfa.freeforums.net/thread/8/feedback-demo-week-june-2018`
3. `http://sgfa.freeforums.net/thread/8/feedback-demo-week-june-2018`

Another step closer to the final release of SGFA and another Demo just for you

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Final Presentation – SGFA Productions (2018-07-01 13:17:51)
[...] Demo Build [...]

Automatic Deployment (2018-06-04 14:46)

As you may know, Unity has several licenses. Using the Free License limits the amount of features, which might get really helpful over time. Things like Cloud Integration, Sharing with multiple Persons and therefore Unity Accounts as well as Automatic Deployment are only available in the Pro Version.

Sharing the files with the team is a very essential part. Thankfully we could simply find a workaround, sharing our Unity files using GitHub. Due to this solution, we upload most likely more files than initially necessary. With some small tweaks to the .gitignore, it is nevertheless quite good manageable.

Trying to find a similar solution for the Automatic Deployment as well as for Continuous Integration we ran into some issues, we would like to point out to you.

With the Help of TravisCI it is possible to apply automatic deployment to almost any project. Therefore our idea was to "use" a Mac on Travis, run the tests there and if these run through without any errors, build and deploy the game for any platform (Mac, Linux, Windows). After a long period of time in which we set up the tool and applied the needed logic to the project, we still got several errors.

- In some cases, Travis was not able to munge the Assets correctly. This was due to our use of .blend-files. After installing Blender on the machine, it was able to build the game in a proper way - so we thought.
- After we fixed this issue, new errors occurred. Unity on Travis was not able to "understand" our tests. This is due to the fact, that tests are not activated by default in the Unity Editor and have to be set active manually. Here we have no solution, on how to fix it.
- Another issue is the use of non-standard Unity packages. Working with AI, we make use of the NavMesh Component which has to be included manually as well. Since we do not know a way on how to apply Custom Packages on TravisCI, we were not able to solve this problem as well.

Especially to the time limitation and the fact, that we had to work on other courses and exams as well, there was simply no way for us to find a proper solution to build and deploy the game automatically.

We strongly believe, that using a license like Unity Pro makes absolute sense for things like Automatic Deployment. In addition to the dedicated Servers for such Building Processes by the Unity Company itself, experienced developers work on those every day to deliver a much smoother building process with really helpful feedback, what is missing in the code and what could be improved.

Summing up we have to admit, that we were not able to setup a working solution for Automatic Deployment without spending money on the project. Therefore, if you work with Unity, we would recommend another License, to achieve this goal properly without any issues.

Get an insight on how we tried to achieve automatic deployment for Unity

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FlyMusic (2018-06-11 11:12:05)
Hi SGFA Team, just confirming that it works :) Best, FlyMusic

FlyMusic (2018-06-11 11:34:57)
... concerning the installation

Installation (2018-06-05 20:27)

Installing the game is very easy.

Simply navigate to our [1]Downloads Page and click on the Link for the game. You will get forwarded to GoogleDrive, which offers to you 3 .zip-files: one for Mac, Linux and Windows. Simply download the file you need for your Operating System.

After you have successfully downloaded the .zip-file and extracted it somewhere, simply double-click the executable and the game should start.

If you experience any issues, feel free to open a new Thread in our [2]Forum.

Feel free to comment below!

1. `https://sgfaweb.wordpress.com/downloads/`
2. `http://sgfa.freeforums.net/`

Ever wondered how to install our game?

FlyMusic (2018-06-11 11:33:46)
Hi SGFA Team, just confirming that it works Best, FlyMusic

Final Presentation – SGFA Productions (2018-07-01 13:17:26)
[…] Installation Test: Installation […]

Final Build (2018-06-18 09:08)

We are happy to present our final build during our SE course to you.

Download the Build [1]right here. Provide Feedback using the [2]forum.

Overview Features

- 5 playable Levels, a Tutorial, as well a Story-Snippet
  - From green lands, to sandy deserts solve riddles and find a way to solve the level, working together with your teammate. Fight against deemed souls and try to free them.
  - Get to know the basics of the controls by playing through the guided tutorial.
  - Dive deeper into the Game with every new minute of the exciting Story-Mode, presenting a never before seen storyline.
- Gameplay
  - Experience never before seen COOP-Multiplayer. Play together on one keyboard through multiple levels, solving riddles or fighting against AI Enemies.
  - Combine what you have learned in the levels and free all souls.
  - The Angel has the ability to Jump and to heal himself as well as his ally, if he is in range. The Devil on the other hand is the only one who is able to attack or destroy objects. Combine your abilities wisely to manage the 5 different levels.
  - Friendly Human Survivors will give you tips on how to get through a level.
  - Get general Information about a level directly in it by the press of a button.
- Menues
  - From the very beginning of the Main Menu you will find yourself in the World of SGFA. Surrounded by Forests, Fires and Waterfalls, you are free to start the Story, Select a specific Level, change some Settings, get to know the Controls or learn more about the game.
  - Easily Pause the Game using the Pause Menu. Continue playing, Navigate back to the Main Menu or completely quit the application.
- Sounddesign
  - Clicking through the Menu or fighting the Evil in Person, Souls Gathering: First Alliance will always deliver the right feeling to you - simply with music.

Check out the [3]forum for a complete list of features as well as known issues and bugs.

Feel free to comment below!

1. https://drive.google.com/drive/folders/12oTYUpVB9OJOlT5NiSIKBxmZSX4oiaxi?usp=sharing
2. http://sgfa.freeforums.net/thread/9/feedback-final-se-release
3. http://sgfa.freeforums.net/thread/9/feedback-final-se-release

Our build for the final presentation.

2.5 July

Final Presentation (2018-07-01 13:17)

This is a conclusion of all the work we have done in the SE Course according to our [1]Vision (and further our [2]Project Future).

Due to the length of this Blog Post, use the links below to get to the requested Area.

Content

1. General Information

If there are any problems with not-working links or files, feel free to contact us using either the mail provided on the Handout, the Comment Section below or the [3]Contact Formular on our Homepage.

Sometimes methods or technology has not been applicable to our development with Unity. Although we tried to find workarounds or other technologies, some things were simply not manageable. Please take a look at the depending Blogposts of the following topics for further information.

We are using TargetProcess (TP) as our Project Management Tool ([4]related Blogpost). Making use of this tool, we have to create UseCases to be able to create tasks. This means furthermore, that we have to create UseCases, which are not true UseCases, to track our work properly. E.g. the Camera Movement in the Game had to be implemented. Therefore a UseCase called "Camera Control" had to be created, which contained some Subtasks to work on. Although this is defined as a UseCase in TP, it is not for a player / user. Normal Player UseCases are described by our Overall UseCase Diagram.

2. UseCases

Due to the fact, that Wordpress automatically shrinks the resolution of pictures, follow this link to take a look at our [5]Overall Use Case Diagram.

The single UseCases are linked within the SRS, but can also be accessed following the links below.

- [6]Change Volume
- [7]End Game
- [8]Finish Level
- [9]Free Soul
- [10]Gain Ability
- [11]Move
- [12]Open Menu
- [13]Select Level
- [14]Start Game

3. SRS

Check out the [15]Software Requirement Specification for SGFA.

4. Test Cases

For the following UseCases Feature Files have been created.

- [16]Move
- [17]Start Game

5. Test Plan

- Blogpost: [18]Unit Testing
- Testplan: [19]SGFA _Testplan
- Installation Test: [20]Installation

6. Project Management

6.1 RUP Gantt-Chart

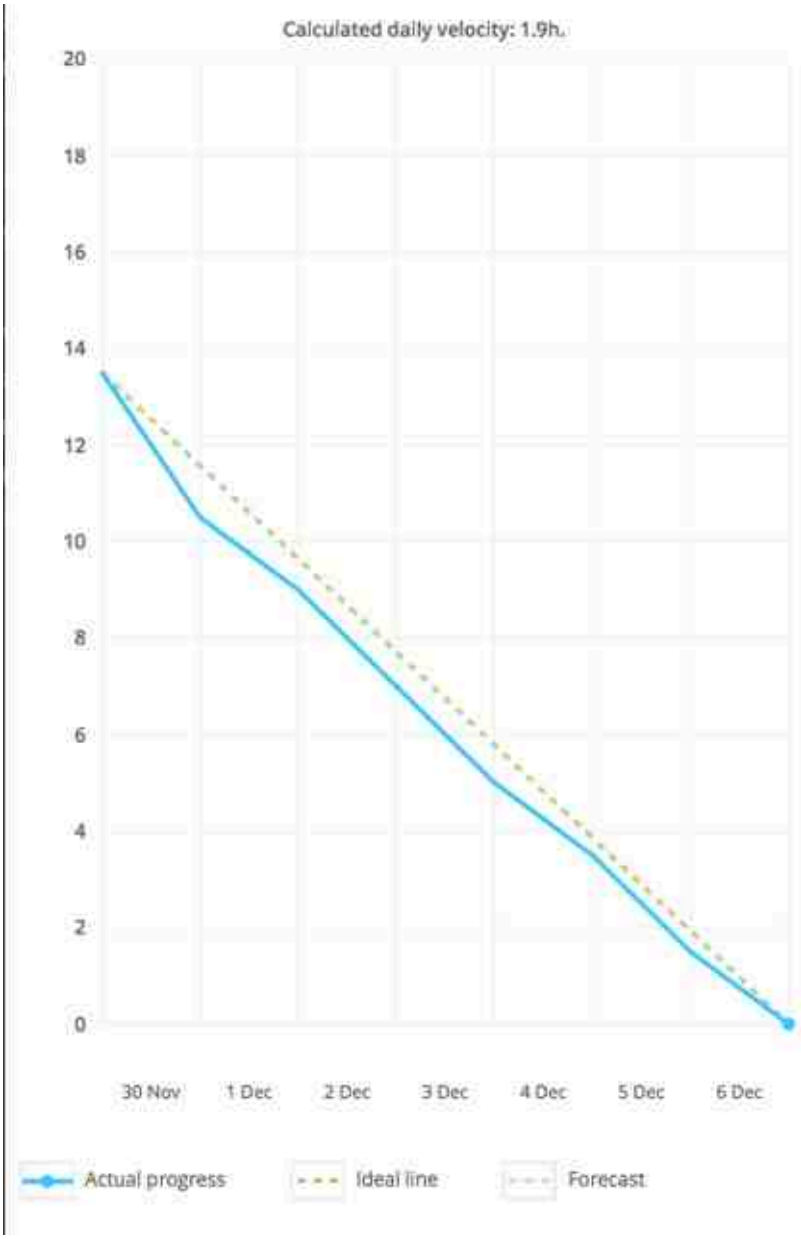
- [21]Week 9: Gantt-Chart

6.2 Future long-term plan using FP-Estimation

- [22]Time Estimation & Function Points
- We compared our estimated time to the Time we actually spent. You can see the comparison of spent and estimated [23]here.

6.3 Burndown

- Either check out our BurnDowns via the links below on GitHub, or check them out right in this Post:



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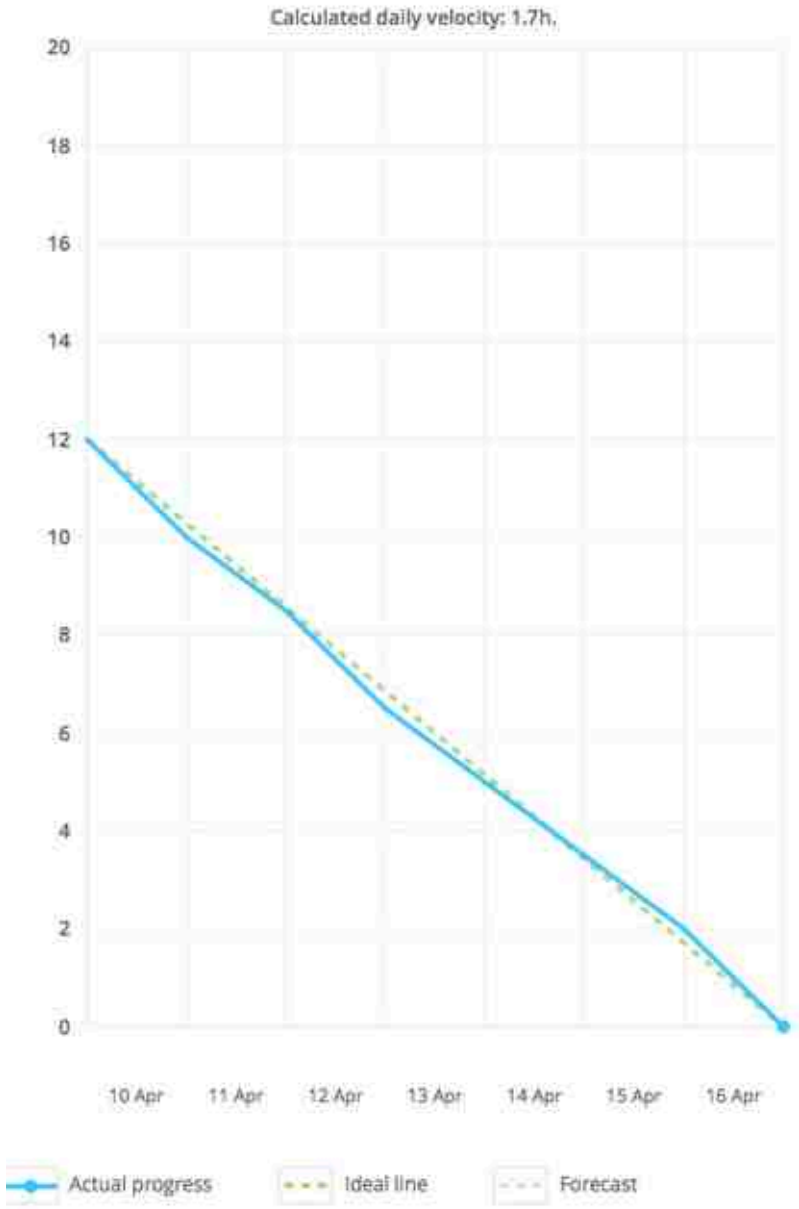

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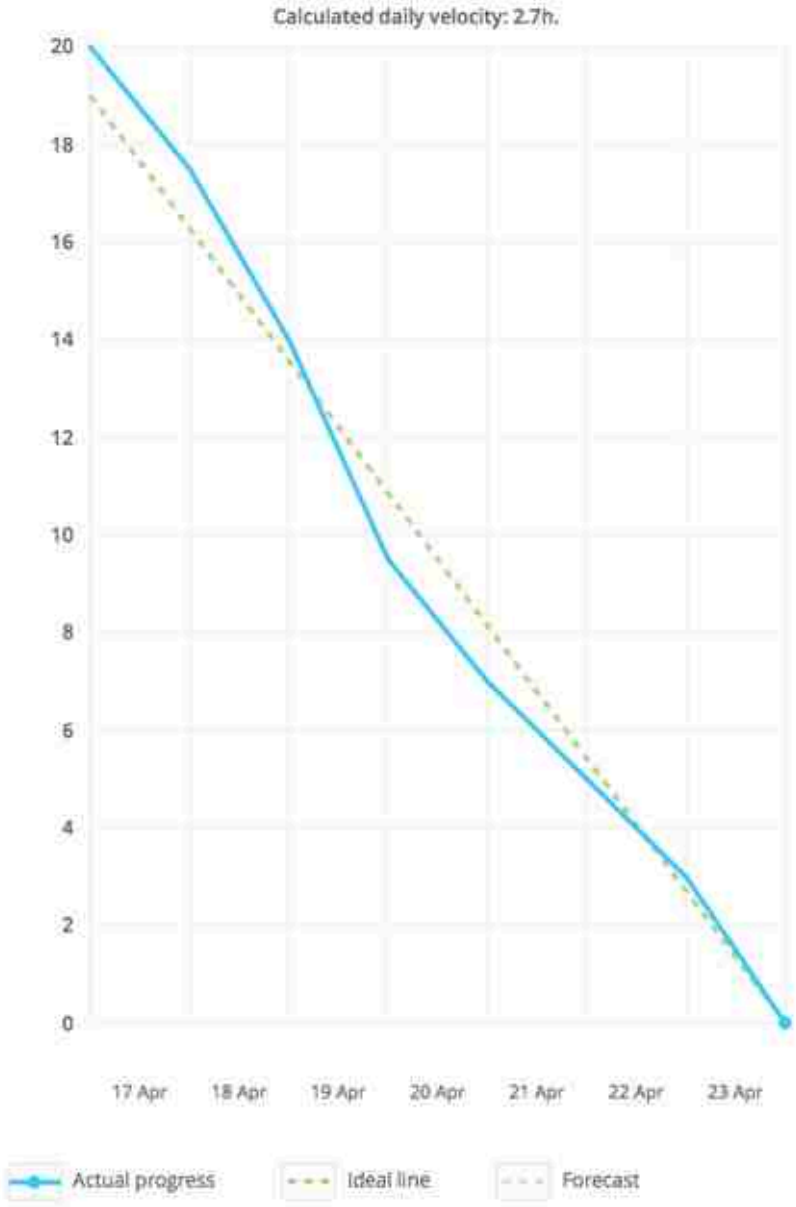

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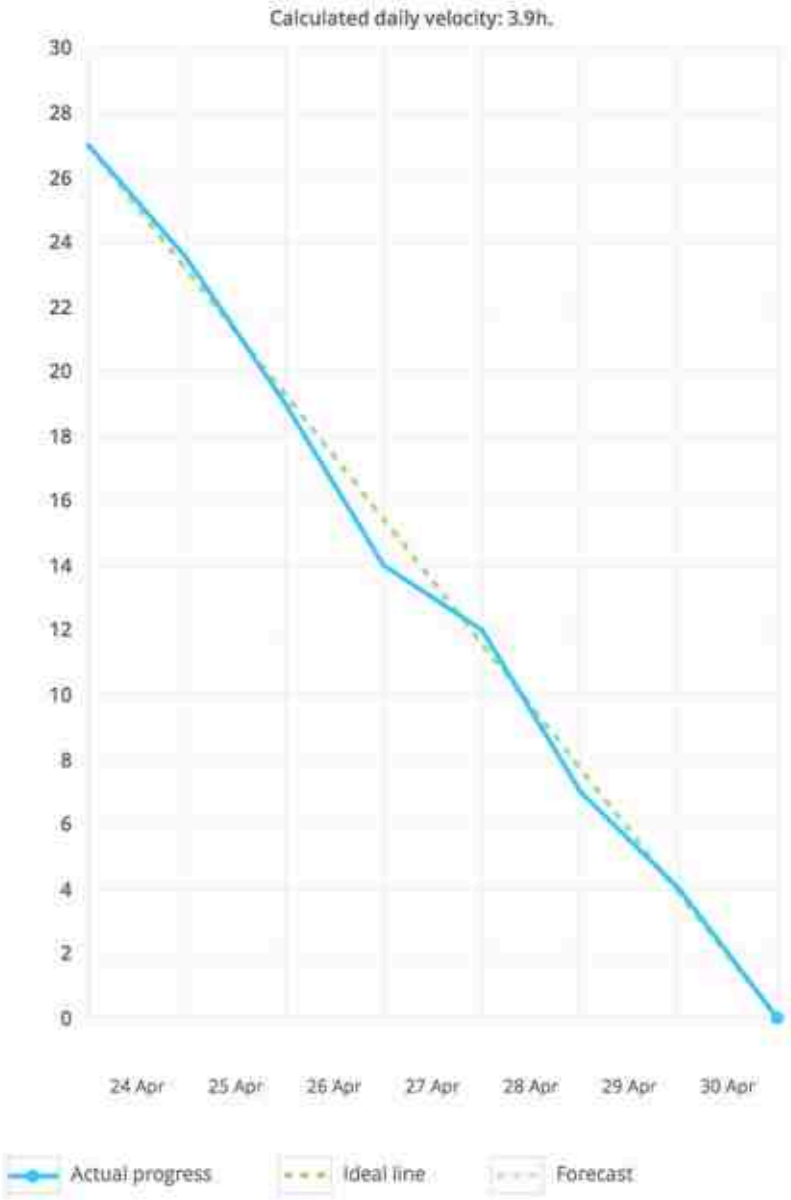

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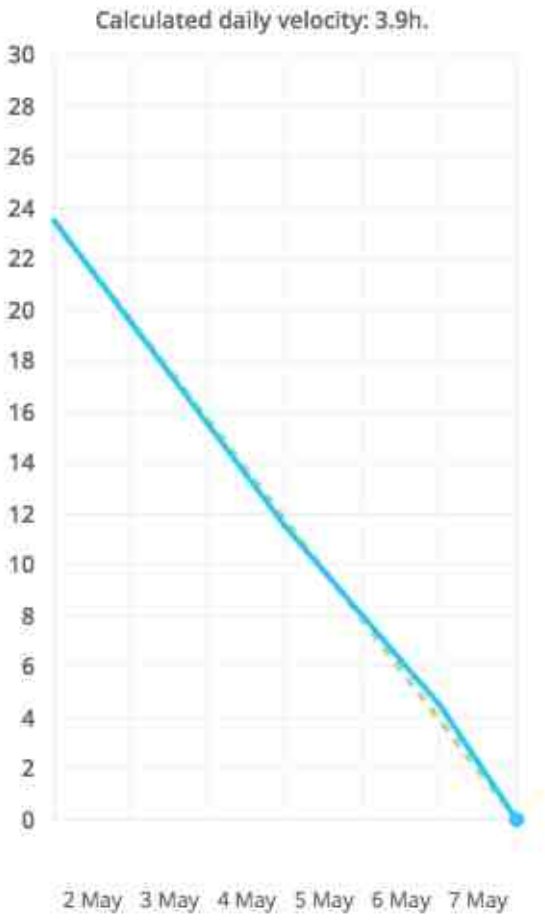
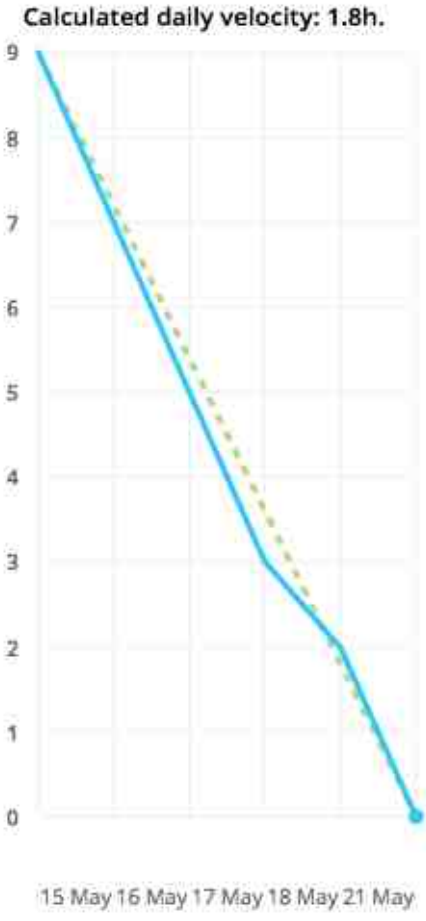
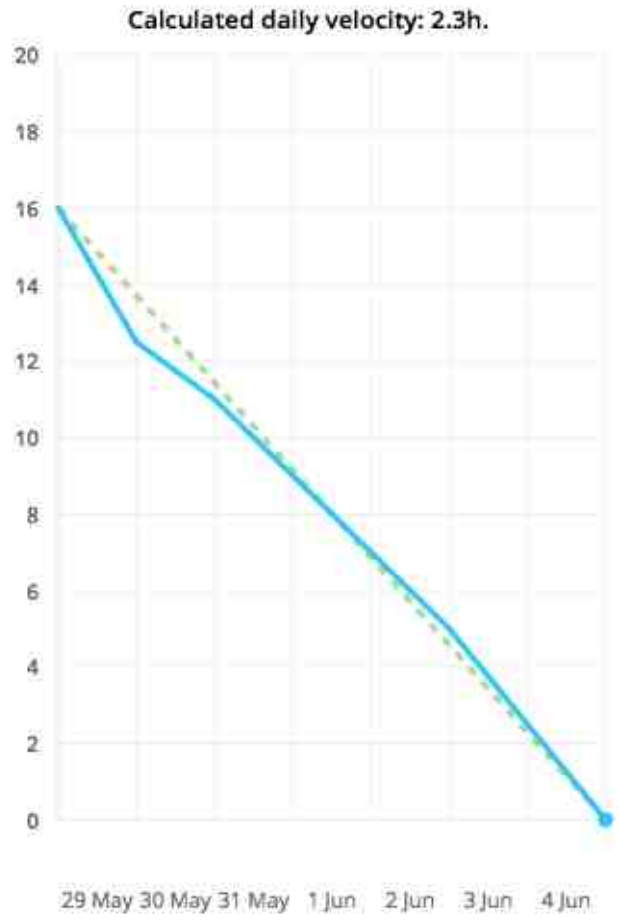


Sprint 9



Sprint 10



Sprint 11

6.4 FP Calculation

Blogpost: [24]Time Estimation & Function Points

Function Points & Velocity: [25]Here

For the Calculation of Function Points we had to develop our own algorithms. The formulas for coding related tasks and graphical tasks can be found on the Excel sheet linked above in the Tabs [26]Graphical Calculation and [27]Coding Calculation.

6.5 Ability to execute

- Try it yourself! On our [28]Downloads page you will find all the required files.
- [29]GitHub Repository

7. Quality

7.1 Architecture

- [30]SAD

8. Metrics

[31]Metrics

9. Risk Management

[32]Time- / Risk-Management

10. Automatic Testing

Our Tests run whenever we create a new Build. Testing in Unity is done via Play Mode Tests and Edit Mode Tests. Read more about it in our [33]Unit Testing blogposts.

11. Pattern

Related Blogpost: [34]Patterns

12. Other Blogposts

[35]Legal Announcement

[36]Project Future

[37]Story

[38]Feedback

[39]New Build

[40]TargetProcess

[41]Roadmap SEM2

[42]There is more…

[43]E-Portfolios

[44]Demo Build

13. Presentations & More

Youtube: [45]Youtube Channel

Forum: [46]Available on freeforums

Midterm Presentation (as .PDF): [47]SGFA _MidTerm

Midterm Build: [48]Available on Drive

Blogpost Midterm: [49]Midterm Summary

Final Presentation (as .PDF): [50]SGFA _Finals

Final Build: [51]Available on Drive

1. https://sgfaweb.wordpress.com/2017/10/08/vision/
2. https://sgfaweb.wordpress.com/2017/10/09/project-announcement/
3. https://sgfaweb.wordpress.com/contact/
4. https://sgfaweb.wordpress.com/2017/12/11/targetprocess/
5. https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/UseCaseDiagram.png
6. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/ChangeVolume/ChangeVolume.md
7. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/EndGame/EndGame.md
8. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/FinishLevel/FinishLevel.md

9. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/FreeSoul/FreeSoul.md
10. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/GainAbility/GainAbility.md
11. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/Move/Move.md
12. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/OpenMenu/OpenMenu.md
13. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/SelectLevel/SelectLevel.md
14. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/StartGame/StartGame.md
15. https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/SRS.md
16. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/Move/Move.md
17. https://github.com/joachim747/SGFA/blob/master/Documentation/UseCases/StartGame/StartGame.md
18. https://sgfaweb.wordpress.com/2018/05/04/unit-testing/
19. https://github.com/joachim747/SGFA/blob/master/Documentation/SRS/Testplan.md
20. https://sgfaweb.wordpress.com/2018/06/05/installation/
21. https://sgfaweb.wordpress.com/2017/12/03/gantt-chart/
22. https://sgfaweb.wordpress.com/2018/04/23/time-estimation-function-points/
23. https://docs.google.com/spreadsheets/d/16bN6iqE1kUOublT89UNWeLBumtjJIcAuC32D5QTfd50/edit#gid=74017289
24. https://sgfaweb.wordpress.com/2018/04/23/time-estimation-function-points/
25. https://docs.google.com/spreadsheets/d/16bN6iqE1kUOublT89UNWeLBumtjJIcAuC32D5QTfd50/edit?usp=sharing
26. https://docs.google.com/spreadsheets/d/16bN6iqE1kUOublT89UNWeLBumtjJIcAuC32D5QTfd50/edit#gid=1893858993
27. https://docs.google.com/spreadsheets/d/16bN6iqE1kUOublT89UNWeLBumtjJIcAuC32D5QTfd50/edit#gid=987209491
28. https://sgfaweb.wordpress.com/downloads/
29. https://github.com/joachim747/SGFA
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Edited: July 1, 2018