

Assignment 2: Prototype & Playtesting

Game Design course 2016-2017, Utrecht University. Version 1.0

Overview

The second practical assignment focuses on the game design itself. It represents one large cycle in the iterative game design process. You will not 'just' design a game, but you will need to think consciously how to achieve the desired experience and evaluate the design using playtesting.

Tasks

Initially, your team will formulate a vision which will determine the direction of the design. You will craft a feasible design which strongly generates the experience expressed by your vision. The design should be implementable in a time-efficient manner, as there is little time available. During the implementation you are encouraged to adapt or extend the design to make the experience stronger resemble the vision. After the prototype deadline, a playtesting session will be prepared, conducted and evaluated. You can write the documents in Dutch.

Team

The teams will be the same as the teams for assignment 1. The game ideas from assignment 1 may be used, although a reconsideration or modification is recommended because some ideas are less suited for this assignment.

Context

The assignment represents one cycle in the iterative game design process. It is one of the first cycles in a development track because it focuses purely on the general game experience, not on the finer details.

Difference with the game technology introduction project

The goal of this assignment is to design and test a game experience, this is different from what you're used to when creating the introduction project game. Creating the prototype is not about art, implementation, promotion, or polish (unless one of these is essential for the experience). You will have little time available to develop your prototype, so you must create a smart design which is easy to implement while still delivering a strong experience.

Deadlines

Keep track of these deadlines:

- Sunday March 5th before 23.59: Submit subtask 1 (vision document)
- Thursday March 30th before 23.59: Submit subtask 3 (design & prototype)
- Thursday March 30th before 23.59: Submit subtask 4 (playtest research plan)
- Friday April 7th before 23.59: Submit subtask 5 (playtest evaluation report)

Grading

Subtask 1 and 3 are graded together and subtask 4 and 5 are graded together, so you will receive two grades for this assignment. The grade for subtask 1 and 3 counts for 2/3rd towards the Assignment 2 total and the grade for subtask 4 and 5 counts for 1/3rd towards the Assignment 2 total. Subtask 2 is a small bonus or penalty on your overall assignment 2 grade.

Subtask 1: Vision statement and initial design

As stated in the introduction, you will not *just* create a game prototype. The prototype will test if the intended game experience is delivered. The first step is to identify what your intended game experience is, and to formulate an initial design how this experience can be achieved.

The process starts with a game idea. The game experience is described in a vision statement. Before formulating an initial design, it is necessary to analyze the intended game experience. What do you want to achieve *exactly*? The aesthetics from the MDA framework will help with the analysis. Using this deeper understanding of the intended experience, you will create some initial design decisions. These decisions are your hypothesis for how the game experience can be created.

The document

The entire process will be written down in a document. The following steps should be present to describe the idea:

- **The game idea.** This does not need to be very concrete as you did in the concept document of assignment 1. (However, as you learned in assignment 1, it is still important to make it concrete for the development team. But this does not need to be in the document.)
- **The vision statement for the game,** describing the game experience.
- **The target audience for your game.** Do not focus only on age and gender. Try to be more specific, for example: “hardcore games who like number-crunching strategy” or “people who want to play something relaxing in the evening”.
- **Your unique selling point.** Explain why this game will be interesting for the target audience instead of similar games. This should be a game *design* aspect.

The document should also analyze the intended game experience:

- The analysis should start by identifying the **1 or 2 most important aesthetics** (as explained in the MDA lecture). The aesthetics should follow naturally from the vision. If the relation with the vision is not obvious, it should be explained.
- Next, more detail should be specified about the aesthetic. For example: what *type* of challenge is there in the game? (e.g. visual-spatial challenge, or logical-mathematical, etc.) Another example is: what type of discovery is there in the game? (e.g. discovering environments, or discovering gameplay mechanics, etc.)
- The analysis may go even deeper into examining the intended experience, and what the consequences are for the game design. You may include other aspects such as the target audience and the unique selling point in the analysis.

And finally the document should contain several initial game design decisions. Note that this is not a complete design or a regular design document. The decisions should follow naturally from the analysis, or the relation should be explained. Some examples of design decisions are the following:

- If the analysis reveals that it is important that there is a visual challenge where the player must track something in a chaos, a design decision may be: “There are many small things constantly moving through the level, and they come very near to the player to increase the distraction.”
- If the analysis reveals that it is important that there is a lot of narrative freedom, a design decision may be: “There are a lot of characters present who each tell a part of a story

through dialogue.”

It is important that these design decisions focus on realizing the intended experience. Note that the design decisions are relatively concrete, they describe things you can put in a game although they don't necessarily specify how exactly.

There is a template available for this document on the course website.

Caution

Keep in mind that the idea and the design decisions generated here should be feasible to implement. You only have approximately 4 weeks. Subtask 2 will require you to do a feasibility check. A rule of thumb is to plan a game which you can implement in 2.5 weeks. Any additional time can be used to improve the design. Another tip is to take the grading criteria for subtask 3 into account (such as originality and realization).

Requirements

- The vision document should contain all aspects defined in the list above.
- About 4-5 initial design decisions are expected.
- There is no specific length requirement, although in total about two pages is expected.
- Deliver a pdf document.
- Name the pdf “P2.1- team-#” (*where # is your team number*)
- The document should contain the name of the team and the names of all members.

Submit the vision document by email to game.ontwerp.2017@gmail.com subject [P2.1-team-#]

Deadline: Sunday March 5th before 23.59

Subtask 2: Feasibility and planning

Tutor TA

Your tutor TA can help you with all sorts of things such as technical issues, teamwork difficulties, and game design questions. You can also ask your TA for feedback on how you are progressing and the quality of your work.

To make the tutoring work, you need regular contact with your tutor TA. You will have weekly meetings during the practicum sessions on Friday with your TA, where you should keep him/her updated about the project and ask your questions. Meeting with the TA is your responsibility as a group. To encourage this, you can get a small bonus on Assignment 2 if you keep your TA involved very well. Conversely, if you repeatedly neglect to meet with your TA you will get a small penalty on Assignment 2.

Checking feasibility and planning

In your meeting in week 9 (or 10), you will present your ideas to the TA and discuss the feasibility and suitability of your idea. In week 9 or 10 you will present a concrete planning for subtask 3 to your TA. The planning should have 1 week of spare improvement time at the end.

In the weekly meetings thereafter you can for example discuss these things with your TA:

- How your progress is in relation to the planning, and how the planning should be modified.
- What design decisions you have made to support the vision.
- Any problems or questions you encountered.

If you have trouble or a difference of opinion with your tutor, contact the lecturer.

Subtask 3: Design and develop the prototype

The prototype development is focused on two things: the creation of the prototype and continuing on the design decisions from subtask 1.

Design decision document

The design decisions from subtask 1 are the basis for the design decisions in this subtask. During the development you will have to modify or remove (some of) these design decisions. Also, new ideas for design decisions will arise during the development process. Track these changes in the design decision document. The document will be initially filled with the design decisions from subtask 1.

The design decisions in subtask 1 were quite general. It is to be expected that the design decisions added during the development will be more concrete and focus on smaller aspects of the game. Furthermore, while the design decisions in subtask 1 were based on the analysis, the design decisions in this subtask should be based on both the analysis from subtask 1 and practical experience during the development. Make sure to note down the reasoning for the design decisions.

The final design decision document should give a good overview why the game realizes the intended game experience. Note that the creation and analysis of design decisions is a very important part of subtask 3 and everyone in the team should be involved.

Prototype

The prototype should focus on implementing the *design*, not on art, technical implementation, promotion or polish (unless one of these elements is essential for the experience).

The prototype can be made with any programming language, tool and/or libraries. To make the grading doable, it is required that the game can be executed directly on a Windows 10 machine without needing an installation or peripherals such as a controller. Exceptions may apply, contact the lecturer to discuss this.

Be smart in your implementation choices. Creating a prototype is about getting the job done as fast as possible. If you can use existing things, you are encouraged to do so! If you're going to copy large parts of a game, consult with your TA or the lecturer first.

It is important that the prototype is functional. Bugs or other glitches impairing the game experience negatively affect the grade. Make sure to add instructions for controls and also add cheats so the graders can see the entire game.

Requirements

Requirements for the design decision document:

- There is no strict length requirement. In general 3-4 pages is expected to be sufficient.
- Deliver a pdf document.
- Name the pdf "P2.3- team-#" (*where # is your team number*)
- The document should contain the name of the team and the names of all members.

Requirements for the prototype:

- It can be executed directly (on double click) on a Windows 10 machine without needing an installation or peripherals such as a controller.
- All relevant source code and materials must be included in the submission.
- It must be functional, contain control instructions and cheats.

Grading

No judgment is made on whether the vision itself is fun or not.

Criterion	Poor	Fair	Good
Realization of vision (very important)	The experience formulated in the vision is not strongly present in the game. It seems as if there was not a focus on the vision during development.	The experience from the vision is clearly present, although not very strong. It is clear that the team paid attention to the vision.	The experience from the vision is strongly present. The game is very focused on delivering the formulated vision with few distractions. (This requires a vision which is not very easy to realize)
Design decision originality (important)	The decisions are not very original. Other games commonly use the same design elements.	There are a few original design decisions which are rarely seen in other games, but most decisions are common.	There are several original design decisions which have a large positive impact on the experience.
Design decision explanation (important)	There are a few decisions where the relation to the vision document is explained clearly, but the explanation of most decisions is questionable. It seems like the decisions were an afterthought.	Most decisions clearly follow the vision document, and it is clear how they do so. There are also some decisions where the indicated design effect is not very clear.	It is very clear how the decisions enforce the vision document. There are almost no decisions present where the explained contribution to the vision document is questionable.
Implementation (important)	Several design decisions have not been implemented and/or some bugs significantly affect the experience.	All design decisions are implemented. The game works, but there are occasional hiccups or rough edges.	All design decisions are implemented. The game works smoothly.
Formatting (less important)	The document has a title and a few sections, but not much more formatting.	The document is divided in logical sections and paragraphs. The different design decisions are clearly separated.	In addition to "fair", the document is well polished and contains several images and colors to aid in the explanation.
Language (less important)	There are some weird sentences.	Most sentences are nice and clear.	It is very easy to read.

Deadline

Two things must be submitted in one zip-file: The prototype including source and the design decision document. The zip file should be mailed to game.ontwerp.2017@gmail.com subject [P2.3-team-#]

If the zip-file is larger than 25 MB, it cannot be emailed. In this case: upload the zip file to WeTransfer, and e-mail the link to game.ontwerp.2017@gmail.com subject [P2.3-team-#]

Deadline: Thursday March 30th before 23.59

Subtask 4: Playtesting research plan

Your team will be creating the research plan for a playtesting session. This means that you have to think carefully how to construct the playtest session in order for it to yield the desired information.

Research questions

The main research question in your plan will be “How is the intended experience (as described in P2.1) realized in the player?”. This question is too vague to test directly, therefore you will have to create more concrete sub-research questions.

Before creating the research questions, first give a short summary of the intended experience, as formulated in P2.1. Make sure to include the vision statement.

Create 3-5 research questions which investigate a certain aspect of the intended experience. This does not have to be something which is literally in the intended experience, but it should be closely related. Describe shortly how each question is related to the intended experience.

When thinking of research questions, try to formulate them as specifically as possible. This will make it easier to answer them. For example, it is too broad if your research question is “is the game challenging?”. Try to formulate more specific questions about aspects of the challenge. Refer to the playtest lecture for examples.

Method

The next step is to make a plan how you want to answer the research questions. There are several methods to gather the information you need such as a questionnaire, in-game metrics, participant observation, and interview.

For each research question, write down what type of method(s) will be used (e.g., questionnaire, observation, interview, metrics) and describe shortly why this is appropriate. Note that you should use at least one qualitative and one quantitative method in total.

For each research method you will use, make a detailed description how this will be executed. Write down at least the required preparations (e.g., questionnaire questions, observation points, starting questions, recorded metrics data), how this data will be recorded/stored, and how the data will be processed (e.g., computing the average and standard deviation, summarizing, finding recurrent topics, graph plotting).

Finally, note down how the serendipitous findings during the playtest session will be recorded.

There is a template available for this document on the course website.

Requirements

- All aspects mentioned above (and in the template) are present.
- There are at least 3 research questions.
- At least 1 qualitative method and at least 1 quantitative method is used.
- There is no strict length requirement, but at most four pages is expected. Don't be overly ambitious!
- Deliver a pdf document.
- Name the pdf "P2.4- team-#" (*where # is your team number*)
- The document should contain the name of the team and the names of all members.

Grading

Criterion	Poor	Fair	Good
Method (important)	The steps in the plan are vaguely described and/or incomplete and it is not clear using what data the research questions will be answered. It is not sure that the research questions can be truly answered afterwards.	The plan contains all necessary steps, although there are some details missing. The connection with the research questions is present. It is likely that useful data will be obtained.	The plan describes all aspects of the playtest in detail. It is very clear how the playtest will be able to answer the research questions correctly. The plan is sure to yield useful data.
Research questions (important)	Most research questions are very general and could be applied to more games. Several questions invite vague or useless answers such as "yes".	Most questions address the intended experience, although still a bit vague. Most of them are formulated to give useful answers.	Nearly all questions target important specific aspects of the intended experience. The questions largely answer the main research question.
Formatting and language (less important)	The structure is minimal. There are some weird sentences.	There is a nice structure. Most sentences are nice and clear.	It is very easy to read.

Deadline

All files must be submitted in one zip-file: The playtesting plan and the material required during the playtest. The zip file should be mailed to game.ontwerp.2017@gmail.com subject [P2.4-team-#]

Deadline: Thursday March 30th before 23.59

Subtask 5: Conduct and evaluate the playtesting

The actual playtesting will be conducted and the results will be evaluated. Using the conclusions, several improvements for the prototype will be proposed.

Playtesting sessions

Execute the playtesting plan you created for Subtask 4. Everyone in the team should be involved in conducting the playtests. Make sure to save all material (questionnaires, notes, etc.) generated during the playtests.

Evaluation report

First the data obtained in the playtest sessions should be analyzed. What can you learn from the playtest data about how the game is experienced? The serendipitous findings should also be analyzed.

The next step is to answer the research questions from the playtest plan using the obtained (analyzed) data. It is important to think about the validity of the results, and which factors may have made the results less valid. A short validity analysis should be added for each answered research question. (Note that it is impossible in practice to do research with perfect validity. That is fine, as long as you know what the validity concerns are.)

Using these results, changes to the prototype should be proposed which improve the game. It should be explained how the playtest evaluation (the previous part of this report) has led to this improvement. The proposed changes should be relatively concrete. For example “something must be changed about the learning curve” is very vague and not concrete. What should you do exactly and how can you achieve that?

There is a template available for this document on the course website.

Requirements

- All aspects mentioned above (and in the template) are present.
- The material generated during the playtests should be submitted together with the evaluation report.
- There is no specific length requirement, although a document of about four pages is expected.
- Deliver a pdf document.
- Name the pdf “P2.5- team-#” (*where # is your team number*)
- The document should contain the name of the team and the names of all members.

Grading

Criterion	Poor	Fair	Good
Gathered data (important)	5 playtests are conducted. Most material is useful, but there is some incomplete or weird data.	At least 10 playtests are conducted. The material is useful for the evaluation.	At least 10 playtests are conducted. The gathered data is processed nicely into tables or graphs. The material is very useful.
Evaluation (very important)	The data analysis gives obvious information. The answers to the questions are not explained convincingly. The validity analysis does not see many of the validity problems.	The data analysis gives some interesting results, but also some obvious results. The questions are answered properly with a decent explanation. Some validity problems are found.	The data analysis leads to several very interesting results. The questions are answered convincingly. The validity analysis identifies some major problems (or explains why these are not present).
Proposed improvements (important)	Most improvements are vague and only mention where things should be improved. For several improvements it is not clear how the playtest has led to this result. The effects of some of the improvements on the game are questionable.	Most improvements are concrete. For most, it is clear how the playtest has led to the result. The improvements follow trivially from the conclusions and are likely to improve the game.	All improvements are concrete and it is clear how they result from the playtest. The proposed improvements are not trivial and are a clear addition to the game.
Formatting and language (less important)	The structure is minimal. There are some weird sentences.	There is a nice structure. Most sentences are nice and clear.	It is very easy to read.

Deadline

Submit the evaluation report by email to game.ontwerp.2017@gmail.com subject [**P2.5-team-#**]

Deadline: Friday April 7th before 23.59