

Seismic Cities

Test Report

TU Delft

SEISMIC CITIES

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TEST REPORT

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INTRODUCTION

The testing for the game has been done in two phases. The first phase is still superficial to improve the prototype. The first phase of testing was done in week 4 and 5. At that time, the game consisted of a prototype with only a small amount of the final features, namely one level with an earthquake and two buildings to place. A lot was still unclear, both on how aspects will work out and what direction the team would want to go. So these tests are important for input for the game and to see where do we miss things that are expected in such a game or things that we can leave out. It was noticeable to not go too deep into the game because there was too little to talk a lot about. For the second phase the beta has been tested. The second phase of testing took place in week 7 and 8, when the game was nearing completion. This allowed us to gather more meaningful feedback and rethink some of the problems we thought to have solved. What questions should be asked, became also more clear. Firstly because of the reactions of the first phase. It became clear what else we wanted to know to improve the game. Secondly because the game had become more complex and therefore more issues were to be addressed.

FIRST PHASE TESTING

The main aspects at this time are:

1. Purpose in the game should be clear:

The purpose in the game was no problem. It was easily noticeable that buildings should be placed that should survive an earthquake.

2. Purpose of the game should be clear:

The purpose of the game is to learn about the effect of soils on buildings. With this initial version there was only one soil and one level, so there was not enough material to really grasp the differences. Though it seemed that the potential was there and every participant agreed to that.

3. Engagement of the player:

The engagement of the players at this stage was mainly tested by watching them during the gameplay and the questions that they asked. This aspect it was also difficult to accomplish because there was only one level and therefore there was little for the player to deepen into. There was no learning curve for the player.

4. Improvements

There were plenty of remarks how the game could be improved what was also helpful for the game design team. To name a few, it was unclear how to play the game and what to do, since there was no tutorial or introduction, and it lacked a goal.

In this phase, it was not really necessary to have only kids as participants. They are expected to have a basic knowledge of what earthquakes are, what they can do and what they are caused by. Furthermore it is important that all participants have affiliation with small computer games. Kids have the curiosity to play the game and wanting to find out how it works, more than adults who give up easily if it is not initially clear to them. Participants were not asked to play the game twice on newer versions because of the learning effect.

SECOND PHASE TESTING

3.1. TESTING SPECIFICATION

The participants for the tests were of a great variety. There had been two children in the age of 13 to 15, two students and one elementary school teacher. For the children it was sometimes a bit harsh to follow it all in English, but this was easily overcome. The students could give helpful input. The teacher had also a nice angle because she knew all about teaching the specific target audience. This were mainly comments on the right level of challenge to keep the player curious. There were male and female participants and the location was either at the university or at a home. There was nothing more necessary to play the game than a laptop and a mouse, so it was possible to play it anywhere that was quiet enough. The tester had a notebook to write down the observations and was always present. The participants have all been people who knew the design team. This has as downside that they may not have been as direct in their replies as they might have. This has been countered by explicitly mentioning that it was of utmost importance that they would, because it would only help improve the game. On the upside the design team believes that people that are familiar with the team are more motivated, compared to passersby that will have other obligations to attend to at the moment they would have been asked to play the game. Mainly because a complete test session takes about 15 minutes.

3.2. THE GAME FUNCTIONALITY

The game functionality was tested by checking if people acted in the way the game design team expected them to. Whether they used the tutorial, or whether they instinctively knew how the game should be played and what all aspects of it were. Furthermore it was important to check if all the aspects were useful and effective for the purpose they were designed for. While participants were playing the game, this was easy to check. Questions that were asked were:

1. Are the game mechanics clear?

For the gameplay itself participants tried to drag and drop the building instead of clicking and placing. Even though this was explained in the beginning, this could be the more natural way. This has not been implemented in the game, because it takes too much time to implement, for the added value it creates.

2. Comments on visuals?

The first thing that was noticed was that players did not read all the text. Moreover, they instinctively clicked on the skip button instead of the text to be able to continue reading. Another button for continuing reading would make it more clear. For the tutorial the same thing happened. The 'ok' button did not stand out enough, so participants were already trying to move buildings as they did not understand they had to read through the tutorial. This has been improved in the game by making it possible to click everywhere and darken the background. The text and tutorial are more evident now. Furthermore, the text was now in English, this made it difficult for some participants. Besides that, the name of the soil was mentioned also in Dutch, but participants expected they could click on it to see the text also in

Dutch. The extra clarification to present the name of the soil also in Dutch made it more confusing instead of clarifying. The soil types did also get a Dutch translation to make it more clear. Lastly, the deeper ground types are not interesting to learn about. They have no effect on the earthquake. Though lower levels are less important for earthquakes so this has not been changed.

3. Comments on sounds?

The type of music was nice, it does not get stuck into your head. The other sound effects however were less good: The earthquake sounded a bit like a toilet and placing a house sound crackling is a bit weird. These have been improved, also the balance between the sound of the effects and the music has been improved.

4. Comments on level selector?

The comment was that there was little to choose. However, this was to be expected, because there were only levels for Italy and the Netherlands. When there are more countries this becomes more useful.

3.3. PLAYER ENGAGEMENT

Player engagement is important for two main reasons. The first one is that players should enjoy the game. If they like the game, they want to play it more. People that play the game is the essential goal of the game creators. The second reason is that players can only learn something from the game if they are engaged. The game should make them curious enough to make them want to learn how they can complete a level. This is all on an abstract level, so this is difficult to measure. However, there are some aspects that can be tested. Do players complete a level because they know how they should solve a level or do they have only found it by trial and error. This is also noticeable when people go to a next more complex level and still make the same mistakes that they shouldn't have to make when they would have learned it in the earlier level. Furthermore, it is possible to ask them questions like:

1. Did you think the game was fun?

In this phase there were some good and some bad reactions. There is a lot of text in the game, especially in the beginning. This is not very appreciated. Participants tend to skip the text and not read it. Combined with the effect that people do not know they can click on the text to read more, the learning effect is greatly reduced. This was known upfront, but to change this is really time consuming. Several things could be done here, as has been written in the game design document.

2. Did you like to play it till the end?

Though there was a bit of trouble in the beginning of the game, the reactions on the game in the end were more positive. This could have had three reasons:

- Less text because a lot had been already explained
- Participants just understood the game mechanics better, so they liked it more
- The levels were more challenging

Another comment was that it would be nice to see a timeline that shows how far the player is in the game (and how much still has to be done).

3. Did you miss anything?

This question was really about whether participants thought whether we had not included specific aspects in the game regarding earthquakes. There was no real feedback on this. This could have been

because of the question itself, or because of the level of knowledge on earthquakes of the participants, or all relevant aspects were simply included for a game like this.

4. What other levels would you like to see?

There were a lot of ideas for other levels. One that came back repeatedly was a tsunami level. Besides that, there were thoughts about levels with water and bridges.

3.4. ACHIEVEMENT OF ITS PROPOSED GOALS

The last aspect that needs to be tested is whether the goals of the game are reached. In the first phase testing this was also included, but in this phase it is a bit more elaborated. Several questions were asked:

1. What is the goal of the game?

The goal of the game was initially in the first phase quite clear. Participants responded that they needed to understand where and how they should build buildings at a location where earthquakes could happen. This essential didn't change in the second phase, it was only enhanced by more levels to give a better understanding of the differences that can occur. One thing to mention is that it works but already takes quite long to play all the levels if you have to find all the solutions.

2. What is the goal in the game?

The responses on the goal in the game were two folded. Some responded that they had to block Poseidon, some responded with keeping buildings upright. In a sense, this is the same objective. This was also tested in the earlier phase. So the goal in the game was sufficiently clear.

3. What did you learn about earthquakes in Italy?

There were three levels in Italy that provided some lessons about earthquakes. There was no participant that noted all the learned lessons after they had played the game. This is something that should be more clarified. After each level the learned lesson will be made explicit in the dialogue.

4. What did you learn about earthquakes in the Netherlands?

There were three levels in Netherlands that provided some lessons about earthquakes. The same remarks can be made as for the Italy levels. There is quite a high level of information push in the game at this moment. Possibilities to overcome this are more repetition or a wider spread of bits of information over more levels.