Game Design Document - Group 3

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22nd May 2019

1 Version

v 0.0.1 of May 22nd, 2019

2 Creators

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3 Game design summary

In our game multiple players can compete with each other where the goal is to beat the opponents' score, or one's own high score by physically reaching a predetermined goal in the city of Bamberg in fewer rounds. The underlying idea of our game is part of the genre of exploration games, where the mechanics motivate players to get to know their surroundings better and ideally enrich the mental representation of the places the have visited. The main method of achieving the construction of such a mental map of a relatively unknown place will be achieved by using reasoning and giving educated guesses about spatial distances of important landmarks in the landscape. Additionally, traveling towards the final destination over checkpoints guides the player through the city along points of interest. The concept of lateration will be integral as the underlying method of assigning scores to the guesses of the players and ultimately decide the outcome of the game. The mode of playing provides a good balance of action and reasoning. As the main focus of the game will be pedestrian players, the final score will be determined by the number of guesses needed to reach the final destination. By limiting the distance of the target and the minimal number of rounds, this game can either be over pretty quick (30 minutes) or be expanded into an activity to fill multiple hours.

4 Players and organizers

The game is addressed at anybody who enjoys exploring the city of Bamberg for at least 30 minutes, either autonomously or in a group. No prior knowledge is needed apart from the basic handling of a mobile device, especially with a Map view. Furthermore interacting with

a dynamic map and orienting oneself along its lines, similar to using a navigational aide, is an advantage. Since the core mechanic is based on distance estimation, a rough grasp on the concept of distance between objects should at least be given. This should be the case with students from grade 4 upwards. Of course this varies wildly depending on what surroundings should be explored. This is especially enjoyable in small teams (2-3) on one or multiple devices, but can also played alone. The multiplayer part and the competitive aspect is introduced by an achieved score (number of required rounds) that can be compared.

This game is mainly designed to introduce first year students to the landmarks of the city of Bamberg, where special focus lies on the buildings of the university. An ideal scenario would encompass embedding a session of this game during the introductory days where new students are being welcomed to the institution.

Staging and organizing game sessions is pretty straightforward, since it can be started from almost any position in the city area of Bamberg. The choice at the beginning is how many rounds a game should minimally have. This choice is facilitated by providing the total distance that is to be covered to the final destination of the game (for instance 2 Kilometers).

5 Geo-narrative and mode of locomotion

Our game is in its original vision a pedestrian game, most students have not yet settled in their new surroundings and as making few assumptions as possible seems wise. Inherently, there is no problem with using other modes of transportation, as long as the checkpoints are reached somehow. The score is kept comparable by assigning points on a per round basis instead of a time to beat. If not playing alone, it makes sense though to have all players use the same means of transportation.

6 Geo-content and game relocation

Our game is in part relocatable, this aspect depends on the underlying database of interesting landmarks. In order to keep the prompting of these locations interesting and relevant, these are not generically taken from the map we are using, but rather from a curated database. The selection of these POI is not only guided by the area players should get acquainted with, but also in which setting. In our case we focus on first-year university students in Bamberg, thus the database does not only include historical and cultural sites, but buildings specific to the students' life.
Players get assigned a score for each guess/round while they are trying to close in on the target. Each guess, and each error introduce a penalty that encourage players to make educated guesses. These landmarks are taken randomly and introduce the players to interesting places in their current surrounding, which will help impress a rough map in the minds of the players. The destination of the game can be chosen, which lets the player decide along which route he or she wants to get to know their surroundings better.

7 Temporal balance and duration of the game

Every Geogame and Exploration game follows the principle of the temporal balancing and time duration. Our game can be played in real-time; this means the players can play independently of their respective time. It can also be played on a turn-base, when more than one players is playing on one device. We took into mind for the players to explore the chosen site within the duration of 30 minutes or more.
When the location (i.e. the buildings of the university) are appropriately chosen, the player then guesses the correct distance of the chosen location from his starting point, this phase might take 3-5minutes depending on the spatial knowledge of the player.
The playing phase will last for for about 30 minutes, the game is over as soon as the player reaches the final destination. The playtime will increase if the player does a poorly job at guessing distances, besides that the number of rounds is increasing which results in a bad ranking.

8 Technology and other equipment

There is no sophisticated technology in our game mechanics apart from an Android device. Anyone who would like to exploring the city of Bamberg can use the software which is similar to mobile maps and other mobile location assistance devices that senses the location.
For multiplayer to play the game, two Android smartphones with the game software installed are what is needed. The smartphones must have the GPS localization switched on. The mobile data also need to be enabled to enhance the accuracy of the GPS system and load the map data.

9 Geogame mechanics and rules of the game

There is a starting point (your current position) and your destination you have to reach (configurable by yourself). You can play with as many people you want or just by yourself. The first one reaching the goal wins. Before the game starts you set a minimum of 'rounds' for example 10. In order to move towards the goal, have to guess the distance of 4 random locations appearing on your map. The locations can be spread all over Bamberg and are typically around your current location. In order to guess the distance to a location you have to enter your estimate when prompted. The error, i.e. the difference between the actual distance to the landmark and your guesses is taken into account for a penalty that is being subtracted from the maximum movement per round. The maximum movement per round is defined by the total distance from start to goal divided my the minimum rounds.
Example: total distance is 1km. Minimum rounds are 10. Your average guessing error is 40m $\rightarrow$ (1km/10)-40=60m So you are allowed to move 60m in this basic example. In the end you will be asked to proceed to a newly calculated point that reflects your guessing performance. Once you reach this destination, the next round, with four new landmarks around you start. Reaching the final destination with as few guesses as possible and the highest score (influenced by the accuracy) determines who wins and who loses.

Multiplayer comes into play when multiple people start at the same position with the same configured minimum rounds.
This game contains the 4 position guess, movement to a new place, a winner and a random factor (the random locations popping up in the map)