CSG: A communicative Game for Interactive Floors

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ABSTRACT

After looking upon the possibilities of interactive floors and taking into account the immense demand for video games today, we developed *CSG*, or *Cooperative Spaceship Game*. *CSG* is designed as a prototype for communicative, interactive floor based games and demonstrates, how playing games at home can once again involve moving the entire body again - and not just your thumbs.

The two to three players' goal is the joint reaching of levels by performing tasks that are randomly given to each player. These tasks can then be carried out by the player himself or he can tell his partners to do it for him since they are closer to the task-subject.

Author Keywords

Cooperative Spaceship Game; Communication; Interactive Floors; Body Movement

INTRODUCTION

With the advent of the *Internet of Things* and thus the rising digital Interaction with everything around us, floors will soon become intelligent entities just like our phones are today.

But next to all the productive things we can now do with our devices, we also want to integrate them into our leisure time. Just like touch screens revolutionised the way we play games, interactive floors will again push the boundaries of the way we think about enjoying ourselves through games.

To understand what players want from a game, we interviewed a professional Game Designer, a Game Design Lecturer as well as a few gamers - both casual and somewhat professional. We learned that nowadays players have a lower attention span and thus want to understand the game right away.
This is why we started out contemplating different mini games and at some point even considered a mini game collection. But what we saw as the main advantage of an interactive floor based game was the fact that the player might not be alone, but rather be in the same room with others and cooperate.

This is why we chose to concentrate on three main goals for our project: **Communication**, **Cooperation** and **Discoverability**.

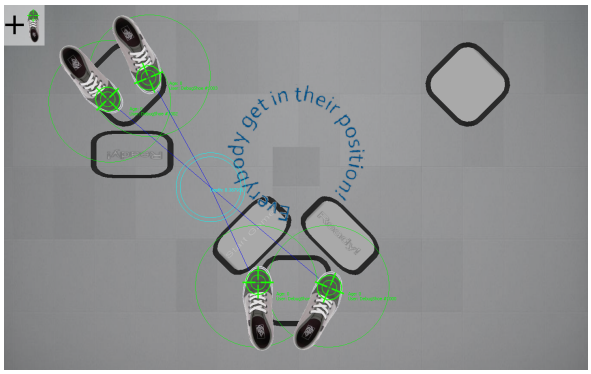

Figure 1. Here you can see the beaming area.

THE CONCEPT OF THE GAME

The game is set on a spaceship, which is on the edge of destruction and the players on earth are the astronauts to save the ship. They have to get on the beaming platforms to beam onto the spaceship, where they get their tasks. These tasks involve flipping switches and pressing buttons, which make up the control bridge of the ship.

Since these widgets are not always close to the player who got a new task, he will often have to tell his partner(s) to do it for him instead. But a task is only active for a limited amount of time and if a task is not performed in time, it's game over. After a certain number of tasks the players will get to a new and harder level where all controls will change and the game goes on. Winning as such is *not* possible, the motivation is rather staying alive for as long as possible.

WALKTHROUGH

¡¡¡¡¡¡¡ HEAD In our scenario two users X and Y want to play the game. As shown in figure? both users enter the floor and they will get in *the Beaming Area*.

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The Beaming Area

1.1 - Users walk to their platforms. 1.2 - Appeared ready buttons will change the ? to a ! after stepping on it. 1.3 - User A (first entered the platform) get a start button and tap on it

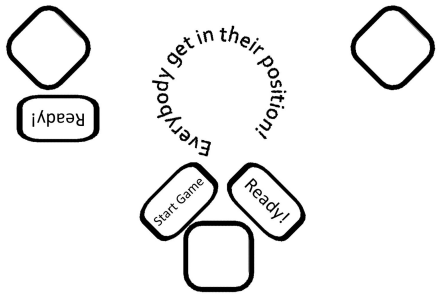

Figure 2. Here you can see the Beaming Area.

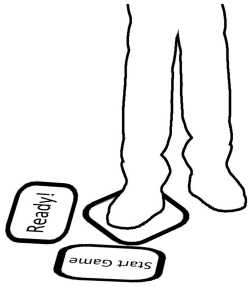

Figure 3. A user stepping on a Beaming Platform.

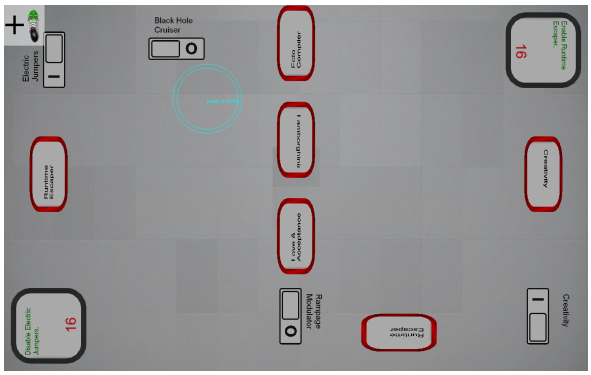

Figure 4. Here you can see the Gaming Area.

The Gaming Area

2.1 - User X and Y follow the arrows to their instruction panels 2.2 - Instruction will be given to the both Users. 2.3 - The two timer starts ticking and both try to fulfill their task by communicating and find their issues. 2.4 User X have to change the slider state ¡....¿ . 2.5 User Y have to change the spinner ¡...¿ on 6. 2.4 - After succeeding their tasks new will be generated. The timer resets once every task is successfully done and start with decremented duration. 2.5 Game finish if anyone tap on the elevator button.

DESIGN

Cooperation as game principle

Our first idea was to create an application, which consists of various minigames that can be successively played against each other. The problem with this approach was, as Willi Scheibel pointed out in our contextual inquiry, that it doesn't allow users to interact with each other.

So in our new design we integrate cooperation as game principle by adding tasks which have to be performed by both users. Moreover we use the spatial distribution of our tasks to encourage interaction between the players, rather than having them perform only their own tasks.

Standing in defined area as login mechanism

Initially we thought about having the user register to the system with an on-floor keyboard and then log in every time he enters the floor. We encountered in paper prototyping that it is really tedious for the user to type in his name, since tapping on small buttons requires precision and having the buttons spread makes them hard to use because it would be nessecary to walk over them to get to the destination.

We decided to use an predefined area in which the user has to stand to start the game. The paper prototyping and the heuristic evaluation showed that this was easily recognizable. ***Here maybe be a picture of the beaming area***

Avoiding roles as game mechanic

Originally we came up with the idea of having different roles who are able to carry out certain tasks. For example role of the captain was assigned to the first person entering a beaming platform and was able to start the game. In our paper prototyping, most of the testers asked about the meaning of the roles. Explaining the concept at this time in the game would require adding a tutorial and make the game harder to discover.

In our final design we replaced the concept of roles by making tasks more specific.

Design Concept 4

Warum ist unser Design immer noch das beste fr den job?

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