

# Team Untangle

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*MSc Media Technology: 2nd Semester Project*

## **Concept**

Collaborative performance in a physical puzzle game

## **Abstract**

An interactive installation inviting people to play a physical puzzle game with an unspecified amount of players. We will measure the amount of people playing and how long it takes to complete levels of the game. The collected data will demonstrate how well people can work together and will present the information in real time.

## **Introduction**

People will simply walk on the the playing field to start playing the game. Their presence is detected and when they move into a 'node', the node will attach it's self to the person as they move around the 'playing field'. Should they move to quickly, the node will detach from them. The nodes are connected via lines to one another, and the aim of the game is to move the nodes around until the lines connecting them do not intersect.

Depending on the number of players, this game can be played by one up to eight players simultaneously. The less time it takes to complete the game, the higher the score will be for that group. The game is collaborative, all players will have to team up in order to solve the puzzle.

## **Realisation**

We have created motion detection and a simple version of the game on a PC with a projector. We will need to hang a projector to allow a projection onto the floor and a separate projection on the wall to display the results (high scores, per number of players) and possible interaction instructions. We would also like to show a DVD of people playing the game so visitors get a clear idea of how it works when they enter the space.

## **Space requirements**

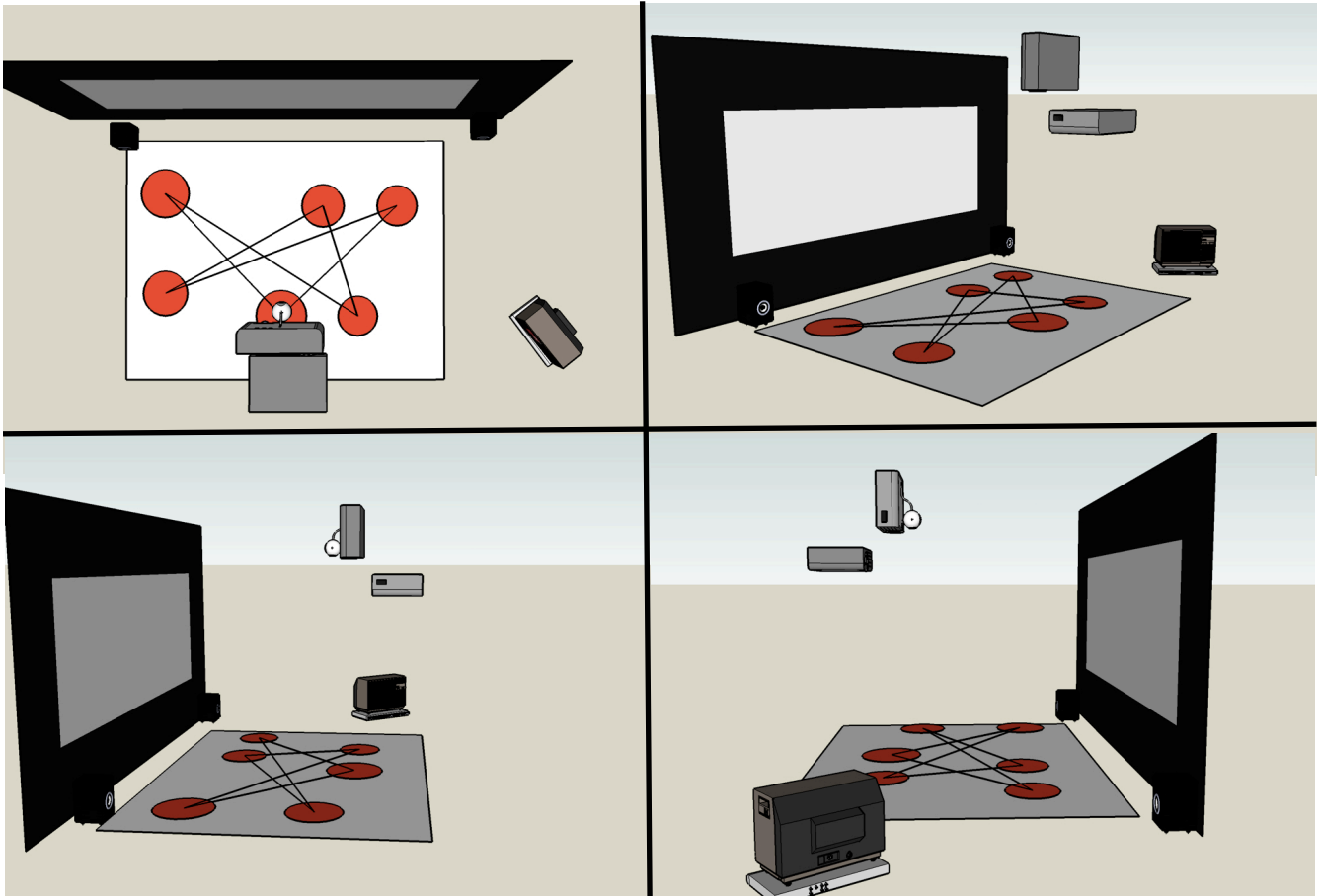
The installation can be placed in either an open or closed space. A dark space is preferable, due to the fact that images will be projected, although we can calibrate the webcam to many lighting conditions.

## **Details**

Installation consists of 2 projections, one on the floor and one on the ceiling. A webcam must be mounted above the floor projection to monitor the movement of people in the space. Details of the way the game is played is projected on the wall, along with a 'high score' board, which can instantly update with how many people are best at playing the game together. We would like to paint the floor and the wall, and hang 2 projectors from the ceiling. (Possibly also the PC). The TV monitor will run a video of people playing the game at the side of the 'playing field'.

The Hitachi projector has a ratio of 1.7~1.9:1 therefore, and we would like to hang it around 3.5m High to result in a minimum 2.3 x 1.7m projection on the floor.

The overall installation should resemble the following pictures.



### ***Required material***

- power boards & extension cables
- Approx. 4m x 3m Floor space, and about the same wall space for projections
- Need to hang 2 projectors, and possibly the PC (depending on available cables)
- 1 Dual Core Windows PC (with full administrator access)
- 2 LCD (1024x768 VGA) video projectors
- 2 powered speakers
- 1 Video monitor
- 1 DVD player

### Possible extras

- Long VGA cable
- Long USB / Firewire cable

### ***Material that can be provided***

- power board, extension cables
- 1 webcam
- 2 floor standing speakers (we would prefer to use MediaTech LIACS powered speakers)
- powered USB hub

### ***Costs***

Transport, paint, building materials for shelving/ projector hanging.