

# Designing an escape room sensory system

## S.C.I.L.E.R.: sensory communication inside live escape rooms

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Raccoon Serious Games develops different kinds of gaming experiences, including escape rooms. In an escape room, a group of players, usually between 4 and 20 people, are locked in a room, where they have to find clues and solve puzzles to escape. When such a room is played, there is always an operator, monitoring the progress of the players and keeping an eye on their safety. Modern escape rooms are quite technologically advanced, where all components of the room interact with each other.

To run these games, Raccoon Serious Games needs a system to manage all technical aspects within the room and provide a way for the operator to keep track of the players. The system must also be flexible to handle many different escape rooms, which are hardcoded in configuration files.

### Project team members

Issa Hanou

*Lead UI & full-stack developer*

Plays classical accordion solos and in ensembles,  
fascinated about algorithmics

Gwennan Smitskamp

*Lead client computers & full-stack developer*

Plays Roller Derby and enjoys dinner parties,  
enthusiastic about home automation after this project

Marijn de Schipper

*Lead infrastructure & full-stack developer*

Plays korfbal and enjoys boardgames, interested in machine learning and data visualisation

To meet these needs of Raccoon Serious Games, a team of three developers has developed a new system, called S.C.I.L.E.R. In ten weeks, they have created a system from scratch. First, they researched technologies and requirements that would be necessary for the system and afterwards implemented the system based on their findings.

S.C.I.L.E.R. allows an operator to monitor a complete escape room. The system connects a user interface to all the devices in the room, which are controlled by the user as well as the configuration of the escape room. This configuration is generated from a JSON configuration file, containing all information for the escape room. The system allows the operator to send hints to the players, control the time and manage their progress through the status of devices in the room and the puzzles they have to solve. It also contains the feeds of cameras in the room to actually see the players. Furthermore, it provides the user with a way to check a configuration file and put it to use.

The system will be used by Raccoon Serious Games in the near future for the escape rooms that they will be hosting.



UI interface with device in use

### Client

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