

Game Design Document V1.1

Group 6 Escape

27 November 2014



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1 Introduction

For 2 and a half weeks now, group Escape has been working on their stealth game. After a few brainstorm sessions, the first prototypes have been made and they are added to first prototype game level.

First of all, group Escape would like to thank their teaching assistant T. Viering for his instruction and advice. Furthermore we would like to thank our project manager R. Bidarra for the assignment which has been given.

2 Gamers who like the stealth genre would love this game

The goal of the game is to find a creative solution to a problem with the limited amount of objects. The audience consists of people who like solving those problems, finding an optimal way to beat the game. Furthermore the thrill of staying outside the sight of camera's/guards is also an important aspect of this game. Gamer who like the stealth genre would love this game.

3 The first person mode

The game will be played in first person mode. This means that the game is rendered from the viewpoint of the player character. This gives the gamer a realistic game experience. The game is played (for now) using the controls listed in table 1.

Control:	Action:
Left Arrow / A	Player moves to the left
Right Arrow / S	Player moves to the right
Arrow up / W	Player moves to the front
Arrow down / D	Player moves back
Escape	Open ingame menu
Spacebar	Interact with objects in the environment
Tab	Open the inventory
Mouse movement	Control the player camera
Left mouse button	Use an equipped (consumable) item

Table 1: Controls in the game

4 Aliens from Aleya use humans as power supply

It's the year 2116. The alien community on the planet Aleya is running out of power. These aliens traversed the entire Milky Way to find a suitable, abundant power source. On planet Earth they found humans as their long sought-after power supply. First contact was made around the 1950's, but any contact has since been denied by government officials. The aliens abducted a sufficient amount of healthy humans, which could deliver enough power to supply entire planet of Aleya. The aliens built a high-security prison below the earth surface, near Roswell, New Mexico, and stored all of the abducted humans they caught in cryogenic cells in this prison. These cells are used by the aliens to extract power from humans. The extracted power will be transported to Aleya.

The game starts in a cryogenic cell, located in the previously mentioned high-security prison. Due to a power failure, the player awakes and is able to open their cryogenic cell. This is likely the only chance the player will ever get to escape from the prison and get back to the surface to at least try to live a normal life again. The player will have to get out of the prison while staying undetected for as long as possible, as being detected by the

alien guards could lead to being captured again. Meanwhile, the player will be moving through a web of rooms and floors, solving game puzzles at times when they see fit.

5 Level Design

The level design is a very important aspect of almost every game, including Escape. Level design determines the flow of a level, i.e. what a player can do in a level. This also translates the story of the game into the said flow. This section is divided into 2 subsections. Subsection 5.1 elaborates more on the general feeling and the looks of the levels while subsection 5.2 explains the different levels in the game more in detail.

5.1 The levels look and feel like a high-tech futuristic prison

The environment of the levels is constructed to feel like a futuristic high-security prison, with complicated technology such as robots and automated security systems. The levels have a high-tech, yet minimalistic look. The aliens are not maintaining every part of the building equally well, which causes to have (to them) less important rooms to look neglected or even abandoned. This, in combination with the power loss of the cryogenic cell at the beginning of the game, shows the player how the aliens can be chaotic and prone to making mistakes in their security. The player needs to exploit the holes in this security and use it to his advantage to escape.

The building gives the impression that even though most rooms look clean and smooth, there is something horribly wrong. This is done through using textures in such a way that if you look closely, you can see inconsistencies in the clean look of the environment.

5.2 The game consists of multiple levels

The game will have multiple levels, which are rooms in this case. The levels combined represent a modern prison building, every room being a different entity. The player must experience the feeling that they come closer to the exit when proceeding through the different levels. The last level has the player leave the building finishing the game. When the player proceeds from one room to another, the previous room can be accessed again. This allows for the player to find their own way through the level, potentially choosing to explore additional rooms which will contain more creative ways to complete further rooms' challenges. The player can also switch between different floors, but the player can only move upwards: there's no way to go back to a lower floor. On the top floor, the player can find a way out and subsequently finishes the game.

6 Interacting with objects

The gameplay is very easy to use. When the player comes close to an object, and the object can interact with the player, a message will appear in the screen. The message explains what the player can do with it and what the gamer has to do to interact with the object. If the player presses the correct button, the interaction with the object will be done.

7 Art

The art of a game is especially important for the first impression of a game, and can change the atmosphere dramatically. Sometimes, if the art has been done really well, it becomes a reason for the player to stop doing anything and just look around in amazement. Some games have produced outstanding aesthetics, which is still possible with lower quality graphics (which was often an issue in older games). In this game, the aim is to enrichen the gameplay and improve the overall experience of the game through the right use of visual art and lighting.

7.1 The style of the game will look non-photorealistic

The art style of the game does not aim to pursue photorealism, because this fits the gameplay better. A slightly grim, animated style is an accurate description of what the game will feel like, but still inherently different from a comic style. Features will be slightly exaggerated to make it clear for the player that the gameplay is slightly less serious than the usual realistic games. Even though the background of the game describes a pretty horrible world, the animation movie-like graphics reduce the seriousness a bit. The game will not feature any blood, but it suggestively shows the lab experiments that the other humans are a victim of.

Lighting will play an important role in the setting of the game, and will even influence the gameplay (for example, using a flash light when an area is dark). Procedural generation is used for textures and adding variations(e.g. dirt on a wall) within existing textures to make them look more interesting.



Figure 1: A collage for the game's artstyle

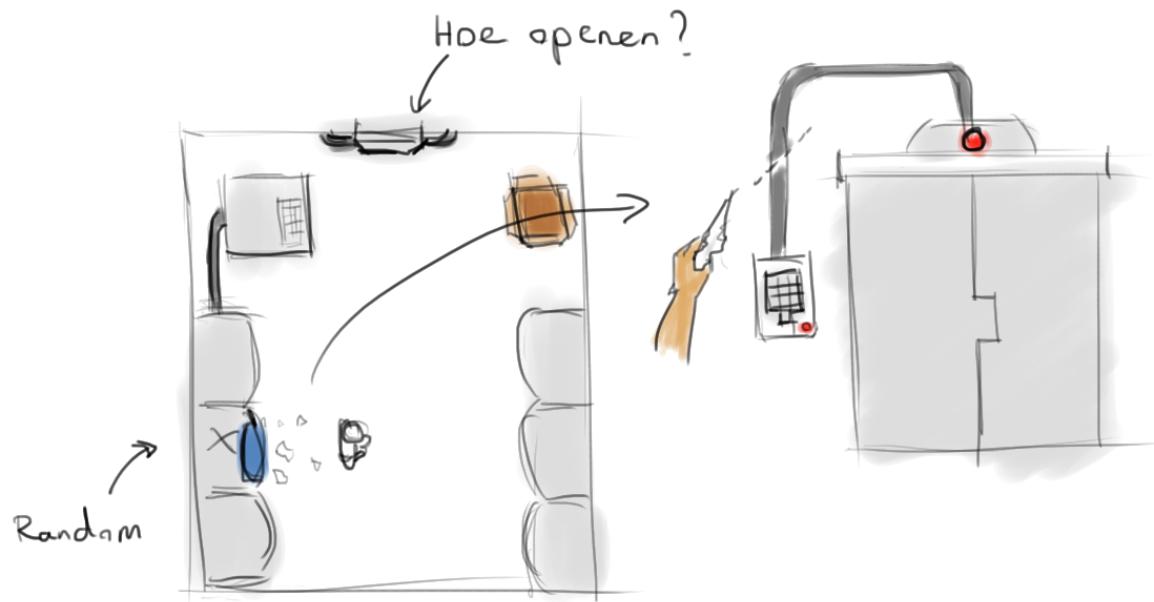


Figure 2: Concept art for the first level of the game

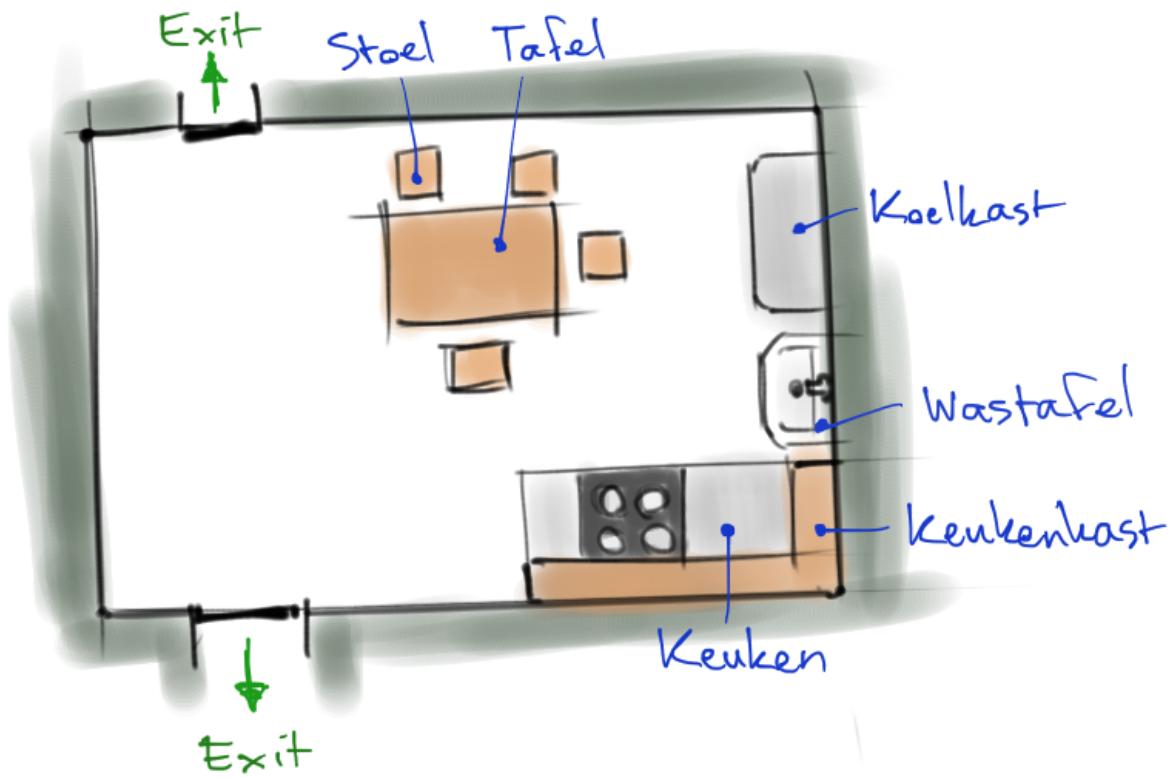


Figure 3: An example of a dining room level design



Figure 4: Switch between floors

7.2 A list of all models and textures that will be in the game

All the models that will be in the game:

- Cooker Hood
- Alien Guard
- Camera
- Computer screen
- Couch
- Door
- Dining Table
- Keycard
- Keycard Lock
- Kitchen Block
- Fridge
- Cryogenic cell
- Ceiling
- Player
- Robot Guard
- Switch

- Table
- Chair
- Storage Rack
- Television
- Wooden Crate
- Flying robot enemy

All the textures that will be in the game:

- Wood texture
- Stone texture
- Floor texture
- Wall texture
- 2 textures for the cryogenic cell
- Textures for the door
- Computer screen english
- Computer screen alien

7.3 The textures of the environment will be minimalistic while the textures of the models will be fancier

The aliens models have similar colors (mainly blue for the skin, grey for clothing or armor), to make it clear they are the same species. The animated characters contain not have a huge amount of detail. As the environment looks mostly minimalistic and smooth (except for rooms like the storage rooms), the animated characters fit in well with this high-tech environment. The high-tech rooms will look quite clean, almost like a new white sort of plastic, and maybe have some bright-colored lights randomly placed through an algorithm. Some other rooms, where the appearance is not as important, could contain stone floors and walls, and pieces of furniture like a wooden table. The contrast between these types of rooms shows that the underground building is not as nice and organized as it looks at first sight.

8 Sound & Music plays an important role in the experience of the game

Most sounds will be downloaded from websites containing unlicensed or freely available sound packs. Sound does at some moments play an important role in the game, for example when you throw a rock to distract a guard, or when you hear a robot approaching you from behind. The game also alerts the player when the guards notice the character.

The music will be made through the use of music creation programs. An external music composer has agreed to help the team with creating music (and possibly sounds) to use in the game. There are going to be made a small number of ambient soundtracks when the player walks normally through the level. When a guard is alerted, faster, panicky music will start playing.

The soundtrack played during normal levels is calm and atmospheric, but at the same time slightly dark and tense. This is to make the player move carefully and sneak from place to place, instead of running all the time. The alerted music however, will make the player panic a bit to level up the excitement of the game and make him run to a safe place.

9 User Interface & Game Controls

The game controls were discussed in section 3 and can be found in table 1. The user interface consists of a visual part of the Heads-Up Display (HUD), as well as visual alerts appearing when the play encounters an object in the scene that allows interaction with the players, for example a pickup object. This message could be something along the lines of 'press *action key* to pick up the *object*'. The HUD will also feature information about the player's current situation, i.e. their currently equipped item, as well as a minimap containing information about previously accessed rooms.

Furthermore, the game features an extensive options menu, allowing for great visual customization, as well as offering fully rebindable keys. Visual customization includes the likes of switching between screen resolutions, full-screen/windowed mode, graphics quality but also more advanced features such as Anisotropic Filtering. This will allow the user to make sure they can maximize their machine's performance in this game. Furthermore, the options menu contains a submenu for audio options, which (for now) contains sliders for the music volume and sound effects volume.

10 MoSCoW!

In this section the priorities of the things need to be implemented or made will be discussed according to the MoSCoW method..

What Must be done:

- A complete level
- Collectable objects
- 3D models
- Animated 3D models
- Sound effects
- Start, pause, end screen
- Options
- Online gamer accounts and avatars
- Procedurally generated textures
- Use Unity's physics simulation for all movement, collisions, etc

What Should be done:

- Play with shadows
- Highscores
- FPS independent
- Unity's triggers only for collision checks
- Credits

What **C**ould be done:

- Pathfinding robots
- Particle System
- Enemy you always lose from
- Store list of collectables on web server
- Save and share game stats with others through social media
- Mobile device as second screen
- Procedurally generated levels
- Race against clock
- Online multiplayer
- Animated textures

What **W**on't be done:

- Genetic Algorithm
- Procedural generated meshes
- Camera shakes
- Unsteady camera
- Custom shader
- Moving platforms