DUSK DESIGN DOCUMENT

OVERVIEW

INTRODUCTION

Suck the lights out and use it to control your enemies! In Dusk, a 2D puzzle-platformer for PC, you are The Defection, a malfunctioning semi-biological being trying to escape a mysterious industrial facility. The Slaves are on the hunt and you can't hurt them, but with a Dusk Gun you can create darkness to hide and release its energy to control those who will try to stop you. Will you overcome all the obstacles and finally see the Outside? Or you will succumb inside the perilous chambers of The Facility?

DESCRIPTION

The game is divided into several linked static screens where the player moves, trying to find the way out of The Facility. The levels are branching, the Defection can only run and jump, and it only takes one bullet or one attack to kill him, so he has to use darkness in order to hide from The Slaves. To balance things out The Defection came in possession of a Dusk Gun. This special tool has multiple uses:

- It can store the light of some light sources, sucking it from distance and creating darkness around them.
- It can release the energy stored inside it for different purposes:
    - Control Enemies
    - Make them explode when their use is over
    - Activate mechanisms
    - Turn on other lights

While in control of enemies, The Defection cannot move, so it's better be in a safe position to use its immense power. Many mechanisms also activate machineries that are death traps for those unaware. The Slaves also possess a Dusk Gun (but cannot control each other or The Defection) and use the same command controls of The Defection to move. This implies that is possible to control one Slave with the energy of the Dusk Gun, then using him to control another Slave, and so on. The game is structured as a series of increasing difficulty scenarios, where platforming skills are mixed with Dusk Gun puzzles and stealth elements.

ANALYSIS OF THE MARKET

Inspired by many glories of the past (Abe's Oddysee, Abe's Exxodus and Flashback upon them all), Dusk enters a market with many new contenders, like Limbo, Inside, Black The Fall. The presence of the Dusk Gun differentiates it from those games, as it may be seen like the Swap Gun from The Swapper.

GENRE

Platformer, Stealth, Puzzle

PLATFORM(S)

PC

NUMBER OF PLAYERS

Single player

GAME COMPONENTS AND MECHANICS

THE DEFECTION

The Defection is controlled by the player using a Joypad or the Keyboard. The player should be able to perform the subsequent basic actions:

- **Walk**: The basic movement action of the character. It should give a sense of mass and gravity, without slowing down movement. The more realistic, the better. Game like The Swapper are a good source of inspiration for this action.
- **Running:** Pressing a button, the character should be able to also run, a faster type of walk.
- **Jump**: The character should be able to jump realistically: it should not be possible to change direction while in air, and gravity should be treated like in the real world. Like for the action of walking, a sense of mass and weight should be present.
- **Climb a Ladder:** The character should be able to climb predefined ladder up and down. He should be able to jump while he is climbing.
- **Interacting with levers and buttons and Entering Doors:** The character should be able to interact with predefined machineries and levers with the usage of a single button.

The character will not be able to: stick to a wall, jump from a wall and doing something not listed in this document.

Some interactions with the environment, and the enemies can lead to the death of The Defection, which leads to a load of the game at the last checkpoint. Here are listed all the causes of death:

- Fall from too high
- Controlled and exploded by an enemy with a Dusk Gun
- Killed by a Melee attack
- Explosion by mine
- Crushed by something
- Killed by Laser
- Attacked by a Brute

DUSK GUN

The Defection and some enemies can acquire a Dusk gun. When they are equipped with it, they can also perform the subsequent actions:

- **Aim:** The character should be able to aim with the Dusk gun in every possible direction. The direction is signalled by a cone starting from the dusk gun itself.
- **Suck light from light bulbs**: The Dusk gun is able to suck the light from light bulbs turned on. The character should aim at them in order to do that, and he should have a clear view of the bulbs. He also should be within a certain distance (increasable?) to perform this action. The action can be done only if a Dusk Meter is not full. The Dusk meter fills every time the Dusk Gun acquire light and empties every time it shoots.
- **Inject light into light bulbs**: The Dusk gun is able to do this action, which is the reverse of sucking light.
- **Inject light into enemies to control them**: Aiming and shooting an enemy with the Dusk gun let the Defection control them. The Dusk gun should not be empty (otherwise it should not be able to shoot). For the interactions that can be performed with an enemy controlled, see later in the doc.
- **Inject light into machineries to activate them**: Aiming and shooting predefined pieces of machineries with the Dusk Gun, restore the power that let them function enabling new interactions with levers and buttons.

Note about how the Dusk Gun works: When the character uses the Dusk gun to suck light or to inject it, the process is not instantaneous. It requires some time to complete the process. While sucking or injecting, the character can't change where he is aiming and cannot perform any other action. He is allowed to interrupt the injection/suck whenever he wants, reverting to a previous state. While shooting, the character can still be killed or interrupted by an external event. **Characters who are going to be controlled, cannot perform any action while the light is being injected.**

If any of the action listed above can't be performed, the Dusk Gun doesn't work (i.e. shooting at nothing is prevented). I fthe character tries to shoot at nothing, a sound will occour.

THE SLAVES

The Slaves are the main adversaries of the defection. Similar to him, they come in different shapes, and with different equipment and are controlled by different AI. Here are the main actions they can perform while not controlled:

- **Walk**: The basic movement action of the character. It should give a sense of mass and gravity, without slowing down movement. The more realistic, the better. Game like The Swapper are a good source of inspiration for this action.
- **Climb a Ladder:** The character should be able to climb predefined ladder up and down.
- **Interacting with levers and buttons:** The character should be able to interact with predefined machineries and levers with the usage of a single button.

Enemies cannot jump! Two types of slaves are listed now, with their respective AI. More can be added, with new AIs pattern if there is time.

BRUTE

Brutes doesn't have a Dusk Gun. They have a Cone of Vision that let them recognise the Defection and chase it. He can perform another action:

- **Melee Attack:** This action lets the character kill someone else. It only takes one action to kill someone. With this action both Slaves and Defection can be killed.

Here is a brief description of the Brute behaviour:

- **Patrolling:** The brute moves and use the objects he finds in a recognisable pattern. He continues to repeat it as long as he doesn't see The Defection. His Cone of Vision is oriented left or right (if he is climbing he doesn't have a Cone of Vision).
- **Enemy Spotted:** When the brute spots an enemy (either the Defection, or a controlled enemy attacking someone), he emits a sound of warning and from Patrolling mode, he switches to Hunt mode.
- **Hunt:** The brute start chasing the spotted enemy, following his path as long as he can see him. His Cone of vision follows him and he tries to reach his last known position. If he has to jump, he blocks before doing it. If he reaches the enemy, he uses his melee attack to kill him. When he cannot follow his enemy or he can't find him and he has reached is last known position, he switches to Alert Mode.
- **Alert:** The brute remains still for a small amount of time, switching his cone of vision from left to right. The revert to patrolling mode, and return to his original path.

GUNNER

The Gunner have a Dusk gun. All the actions allowed with it equipped can be performed by a Gunner. Its behaviour is similar to the one of the Brute, with a few exceptions:

- During **Patrolling** he can inject light into light bulbs previously turned on, if he finds them shut off. His Cone of Vision is not limited to left and right.

- During **Hunt** he tries to be within reach of the enemy in order to use the Dusk Gun on him.

CONTROLLED SLAVES

If an enemy becomes controlled by the defection, the following rules apply:

- **The Defection cannot perform any** action while in control: it is totally harmless, and can still be killed by wandering enemies is spotted.
- The camera **follows** the movement of the controlled element as long as he survives.
- **A controlled Gunner can control** another enemy with his Dusk Gun (following Dusk Gun rules). If he does it, the first one is set free from control, and after a few seconds turn into **Alert** mode.
- A controlled enemy can be **exploded**. If an enemy is exploded, controls return to the Defection immediately.
- **All the actions** uncontrolled characters can do, **are available** to the player, but is also true for what he cannot do: i.e. all slaves cannot jump, so a controlled slave cannot jump.
- Controlled Slaves are not recognised as enemies by other Slaves, unless they attack someone.
- If the Defection is controlled, he suddenly explodes.

CAMERA

The camera is static, and shows always one portion of the level at a fixed distance. Every time the character controlled by the player reaches the edge of the camera and surpass it, the camera changes its position to suddenly display another portion of the level. The character is on the extreme of the screen opposite from where he left it: i.e. if he was climbing a ladder and he went outside the screen from the upper edge, when camera changes, he will be on the lower one.

Two exceptions don't follow these rules:

- **Entering a door:** When the Defection enters a door, another transition occurs and a totally new scenario, not connected to the previous one displays.
- **Falling in a pit:** Some falls are mortal for the characters. The camera won't follow them, but a death sound will occur, and a game over screen will be displayed.

HAZARDS

There are many different hazards in the world of Dusk. Some of them can be activated by the Defection or his enemies. All of them are mortal traps. If a character touch them, he immediately dies. Here is a list of the hazards inside the Facility:

- **Mines:** if touched by something, they explode. Near mines within the explosion radius explode as well, and characters inside the explosion radius dies.
- **Lasers:** They can be still or they can move along a predefined pattern. If something they are touching moves, they incinerate it, but if it stays still, Lasers doesn't kill it. To better explain, they are line coloured red or [stealth_laser_color], like a sensor, that can move around the screen thanks to an emitter. The lasers can be of two types: regular, which activate intermittently at constant rate; "stealth", which activate when the player is visible; they are distinguished by their color.
- **Crushers:** It crushes things (if the name wasn't clear). If a Slave or the Defection is crushed, it dies. To better explain, they are like pistons that moves up and down at a clear pattern.

If there is time, other Hazards will be added.

MACHINERIES, DOORS AND OTHER OBJECTS

Here is a list of all the interactive objects inside the Facility:

- **Levers:** levers are positioned at the ground level, can be used by any character, and when used, activate or deactivate another object.
- **Buttons:** buttons are positioned on the floor. Walking over them activate and deactivate machineries.
- **Trapdoors:** Trapdoors are positioned on the floor. They can be open or closed by levers and buttons. When closed, it is possible to walk over them, while, if they are open, it is possible to fall through them.
- **Doors:** Doors are positioned at the ground level. The entrance is visible for the player. The Defection can stand in front of them and enter. Some doors may be closed: a lever should be pulled or a button pressed in order to open them.
- **Moving platforms**: Some platforms move, and anyone standing upon them is transported with them. Some platforms move only when a lever or a button is pressed, while other move without any external input.
- **Barriers (ricontestualizza):** Barriers are objects that rise and fall below the ground in order to hinder the movement of a character. They can be activated and deactivated by levers and buttons.

Other objects can be added, if there is enough time to do them.

LIGHT AND DARK (HIDING MECHANIC)

The only way for the Defection to traverse levels without being killed by the Slaves, is to use and create dark areas where he can hide and not being spotted by enemies. A **Light Indicator** above the screen always shows if the Defection is hidden enough from Slaves. Slaves that can't see the Defection will continue their patrolling.

The Defection is Detectable in these moments:

- Under a light
- When moving
- When shooting

There are 2 types of light: a lightbulb style of light, projecting a cone and a neon one.

OTHER (POWER UPS AND OPTIONAL STUFF)

If we have enough time, it would be awesome to create power-ups for the current abilities the defection has, as long as other enemy types and machineries. Here is a (current) list of every power-ups that can be added:

- Dusk Gun upgrades:
  - Expanded Dusk meter
  - Greater reach
  - Less time to Inject light
- Defection upgrades:
  - Faster movement
  - Moves without glowing eyes
  - Jump higher

STORY OVERVIEW

Mechanica: a world of incomparable wonders, a world dominated by machines that produce, create, sell, and consume. The smoke of industrial chimneys has greyed out the sky. Few automatas walk along the streets, and most of them only live for their job. Rusty is one of them. Twenty-five years in the coal-based implant, working like a mule fifteen hours a day. transporting tons of coal to kindle the Great Furnace. A miserable life. Not different from many others. But then, one day… something breaks. Rusty's arms stop

functioning as they did in the past. His boss, noticing a drop in his performances forces Rust to book a visit at the famous government facility "Luddis' Replacement Field", which take care of repairing old robots to have them ready to work again. But when Rusty goes to the facility, a darker truth is revealed: despite an initial warm welcome of the employees, the place reveal itself as a giant underground factory where old robots are dismissed and recycled to forge new one that can do a better job for the government. When Rusty understand this terrible truth, he decides to escape. Jumping off a treadmill that transports everything to a giant crusher, Rusty find himself in a giant wasteland made of old robot pieces. Being now marked as The Defection by the guards of the factory Rusty starts a long trip to escape this horrible nightmare. After escaping the wasteland, he suddenly find a new prototype: the Dusk Gun. These new weapon, built by the government to be able to better control all the population is a tool that helps Rusty escape the offices above the wasteland. But a tougher challenge await the poor robot. The infamous Labs of Luddis' Field are waiting him. Inside them The Defection find out the bleakest truth: the new robots are not only made of old robot's parts, but they are also equipped with weapons aimed at controlling everyone. Knowing this Rusty tries to escape through the sewers of the facility. But the alert is now at its maximum: traps are set, guards are patrolling, and everything wants to kill The Defection.

Only after a terrible final confrontation with the guards of the facility Rusty manages to escape. He now has this terrible truth in his hands. What will he do?

CONCEPT ART AND ART OVERVIEW

For every object with an on/off status (like lightbulb) sprites with each status.

Every object affected by 2D lighting should have 2 sprites: the normal one, and another overlapping it and visible only when outside light cones. The effect should be a shadowing one.

For the background we will have different layers of silhouettes and some 3d light which enhance the mood of the levels. The lighting in the front will be made in 2d thanks to sprites and overlapping masks. For the lightbulb itself we will do it with emission materials that will give a neon impression. The structure of the light should be however made.

Dusk Gun: There should be a particle effect signaling when we are shooting at nothing (like a lightning up to where we can shoot), and another particle effect (a circle maybe), that show us that the gui sucking/injecting something.

Art delivery of 13 Nov:

New tone shift

DESIGN BEAUTIFY:

- X1 Grass tile full ANIMATED 128x128 **OK**
- X1 Grass tile small ANIMATED 128x128 **OK**
- X1 Dust on ground ANIMATED 128x128 (end-middle-start) **OK**
- X1 Platform (Elevator) (end-middle-start) 128x128
- X2 Light Bulb (on-off) 100x150

- X2 Neon light (base + sprite divided just the light)
- X1 Checkpoint with ANIMATION 25X112 **OK**
- X2 Light Cone (1 neon, 1 light) **OK**
- **DUSK GUN SHADOW**

NON-TILTED STUFF!

TECHNOLOGY DESIGN DOCUMENT
DIMENSIONS

Object	*Size*
Screen	1920x1080
Platform tiles	128x128
Ladders	256x128
Traversable platform tiles	128x64
Trapdoor	196x32
Mines	128x32
Crushers	128x256
Levers	64x196
Button	64x64
Doors	256x320
Enemies	128x196
Player	128x196
Barriers	128x128
Dusk Gun	98x49

Machinery	64x64

PROGRAMMING ISSUES

AI: Enemies can use ladders, not elevators, and in any case they don't fall down things.

SOUND: Whenever a light is shot very quickly, the absorption sound is played but distorted and is not cut when the shoot button is released.

SOUND DESIGN DOCUMENT

Here is a list of all the sound effect needed, based on the first draft of mechanics written. I will divide it for all the objects:

THE DEFECTION
- Walking sound x2 (metallic + stone) x
- Running sound x2 (metallic + stone) x
- Jump sound x2 (jumping and landing) x
- Ladder climbing sound (Half-life 2 docet :)) x
- Regain control after using enemy with Dusk Gun (like a laugh, Abe's Docet) x
- Death sounds:
  - Exploding x
  - Falling to death x
  - Being crushed x
  - Killed by laser x
  - Attacked by a Brute x
- Idle sound (maybe a sound every 5 or 10 seconds doing nothing) x

All these sound should have a gritty and rusty atmosphere. Death sounds in particular should be displeasing.

DUSK GUN
- Sucking light sound (1 to 3 seconds) x
- Inject light sound (1 to 3 seconds) x
- Empty gun sound (can't shoot) x
- Full gun sound (can't acquire other lights) x
- Trying to shoot at something not targetable (scenery, background) x
- Idle sound gun (sometimes, like a sparky thing) x

All the sounds should have a feeling that resembles electronic machineries, like sparks from broken wires.

THE SLAVES
- Patrolling Brute Idle sound (Maybe a sound every 5-10 seconds) x
- Patrolling Gunner Idle sound (Maybe a sound every 5-10 seconds) x
- Enemy Spotted sound (Sound done when switching from Patrolling to Hunt mode to alert the player) x2 (Gunner + Brute) x
- Hunt sound (Something like a bark) x2 (Gunner + Brute) x

- Alert idle sound (Maybe a sound every 5-10 seconds) x
- Brute Melee Attack sound (quick, like a slap) x
- Gunner Shoot sound (maybe it's the same as a Dusk Gun shooting) x
- Walking sound x2 (metallic + stone) x
- Running sound x2 (metallic + stone) x
- Landing sound (not jumping) x
- Ladder climbing sound (Half-life 2 docet :)) x
- Death sounds:
  - Exploding x
  - Killed by laser x
  - Falling to death x
  - Being crushed x
  - Attacked by a Brute x

These are all sounds emitted when they are free, not controlled. They are similar to the ones emitted by the Defection.

CONTROLLED ENEMIES
- Enemy hit by Dusk Gun sound(Brute + Gunner) x
- Enemy set free from control sound (When shooting to another enemy) x
- Enemy Exploded with the Dusk Gun while controlled sound. x
- Enemy Controlled Idle sound (Maybe a sound every 5-10 seconds). x

Controlled enemies should have slightly different sounds to improve the comprehension of the player of what's happening on screen.

HAZARDS
- Mines Sound
  - Idle sound (maybe something that let you know they are there?) x
  - Explosion sound x
- Lasers
  - Idle sound x
  - Shut On and shut Off sound x
  - Sound when touching something not moving x
  - Sound when touching something moving (and killing him) x
- Crushers
  - Move sound (Up and down) x
  - Crush sound x
  - Shut On and Shut Off sound x

MACHINERIES, DOORS AND OTHER OBJECTS
- Levers
  - Lever sound when used x
- Buttons
  - Button sound when walked upon. x
- Trapdoors
  - Opening trapdoor x
  - Closing trapdoor x
- Moving Platforms
  - Sound of platform moving horizontally x
  - Sound of platform moving vertically x
  - Sound of platform stopping x

- Barriers
  - Sound of barrier sliding up and down (is a quick sound, like a door closing and opening x
- Doors:
  - Door Opening x
  - Door entering (should be a sound of The Defection, but is more clear if put here) x
- Lasers: Idle sound (like a fzzzzz) x

LEVEL TRACKS
- Main menu music: Melancholic, sad, like something foretelling the future.
- Level 1: The Facility Wasteland + Offices
  - The first part of the level is set in a wasteland full of old robot's parts. It should be a soundscape full of creepy and distant industrial sounds.
  - The second part of the level is set in low level employee's offices. So mainly mechanics. The character found the Dusk Gun. Less creepy, but with added tension and a sense of "What are these bastards doing?".
- Level 2: The Labs
  - The labs are really something terrible. Some robots are melted to create new ones. This place is truly a nightmare. The sounds should be aseptic, with a sense of eerie and growing terror.
- Level 3: The Sewers
  - The last chunk of the game. To reach freedom the Defection should traverse the blackest part of the Facility: in this place there is less light, we can hear the sound of the Facility above, and everything is set up as a death trap. The sounds should be reverberating, a full of low key notes. Near the end, a little hope arise.
- Credits: Dunno… yet to decide.

TO-DO LIST
- Debugging everything (especially AI and char movement). [Davide + Tom + Marco]
- Build 1/2/3 level design [Tom]
- Change Time of light sucking and improve sucking feedback. [Tom]

3-4th Jan - Last animations by Ulkar

- Death animation of character. [Ulkar]

- Melee enemy (art + silhouette) [Ulkar]

- Music for the other levels + sound Effects [Francesco + Vincenzo]

- Game UI: Menu + pause screen + quit screen. [Marco]

- Credits. [Marco]

- UI Dusk Gun redesigned. [Marco + Matteo]

- Save states. [Marco]

- Player without gun and script to have it. [Davide]

- Enemy Melee. [Davide]

- Splash Screen per il 4 [Matteo]

- Barriers Redesigned and Doors Redesigned [Matteo]

- Change Laser color [Matteo]

- Checkpoint light/Machinery Redesigned[Matt]

- Beautify Level 1/2 [Matteo]

8 Jan

- Trailer[Matt]
- /3 [Matteo]

SUB-PROJECT SCHEDULE (ART)

Prepare tiles according to GDD with the new art direction style-based. Focus on silhouette.

Design two types of light: neon sign with three long bulbs and one alogen bulbs (underground-style like) wit their own light cones, each ones with the transparency into the cone itself in order to show the robot with a light on it that slightly change the colors.

Blur made in PS cause ortographic camera mess everything up. Design which distance corresponds to the amount of blur.

FIXES FOR GLOBAL GAME JAM

- Bug hunt & fixes **CODERS**
- Darker shadows for all enemies (like the main character): 100% black, 90% opacity **ULKAR**
- Dusk Gun shooting at nothing has another lightning colour (or less opacity) **CODERS**
- Make the character faster while walking (x1.1) **CODERS**
- Environmental fixes (lights and .pngs) **CODERS**
- UI tweaks on typeface and selection (not the big rectangle…) **CODERS + MATTEO**
- Fix save & quit (make it bigger) and make it work **CODERS + MATTEO**
- To fix tutorials statements (hidden - movement sensor, stay away) **MATTEO**
- To fix arm of the character **CODERS**

FOR THE GRAPHICAL ONE, IS BETTER TO HAVE EVERYTHING **BEFORE 17th**

SO MATTEO CAN DO THE TRAILER!