



Phobia

Design Document

You are Fear Incarnate

Version 1.0

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VFSTM

Document Overview

Overview

This is the design document for *Phobia*. This document is broken into major sections, each describing a particular aspect of the game. The appendices offer supporting information for the development of the game.

Revision History

This is a brief description of this document. A list of the major changes is provided following each revision number. Furthermore, a list of any outstanding topics or any topic that needs further details is provided.

| Revision | Date | Change Description |
|----------|-------------------------------|---|
| 1.0 | July 12 th , 2011 | <ul style="list-style-type: none">Creation of the Characters, Camera, and Controls section |
| 1.1 | July 26 th , 2011 | <ul style="list-style-type: none">The addition of the game mechanics section |
| 1.2 | August 9 th , 2011 | <ul style="list-style-type: none">The addition of the game modes and progression section |
| 1.3 | August 19, 2011 | <ul style="list-style-type: none">The compilation of all sections into one unified document |

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Game Concept

Overview

This section of the design document will focus on the characters, concepts and controls of Phobia.

Phobia is a 3rd person stealth action game for the Microsoft Xbox 360 combines elements of stealth action gameplay with real world advanced close quarters combat(CQC). In Phobia, players will be put into the role of a black ops Spook, a surgical tool of destruction, dropping into the Second Chechen war to take out high value targets. Utilizing a combination of CQC and stealth techniques the player has full operational choice as to how they complete their objectives.

High Concept

You are Fear Incarnate

As discussed before Phobia is a 3rd person stealth action game for the Microsoft Xbox 360. Players would take on the role of a "Spook", a black ops operative. Spooks are ghosts in that they are never seen or heard, they are simply urban legends amongst military organizations. As such "Spooks" are the most feared operatives.

The primary focus of Phobia is to create an innovative Close Quarter Combat system which has not been seen in games to date. The combat system would be created with a unique and intuitive control scheme, providing a simple input for players to chain together attacks as well as an element of mastery for players. The better players become at utilizing the combat system the more efficient and brutal an assassin they will become.

Common Questions

Why Create this Game?

Phobia expands on the stealth action genre shifting the focus of stealth gameplay from using the shadows to sneak and evade enemies to incentivizing players to use the shadows to get up close and personal with enemies. In-game the "Spook" is a powerful and quite capable opponent, but his strengths lie in Close Quarters Combat. Some of the objectives of the game would be:

- Creating a real world innovative Close Quarter Combat(CQC) system not seen in modern day games

- Predatory gameplay – shifting the focus of stealth gameplay from hiding and evading, to stalking and staging attacks
- Tactical freedom, giving players the skills and capability to execute their objectives as they see fit.

What is the Target Hardware?

Initial development of 'Phobia' will be for the home console systems, exclusively on the Microsoft Xbox 360.

Where Does the Game Take Place?

In Phobia the game takes place in Chechnya, a country within the former Russian bloc which is the center of frequent civil and national conflict.

Feature Set

This section describes the features that make up the overall gameplay experience of Phobia.

Major Features

Revolutionary Close Quarters Combat Gameplay

The revolutionary close quarters combat gives players an incentive to get up close and personal with their enemies as opposed to relying upon ranged weaponry and cover. Utilizing CQC in-game will feature an innovative combat and control system introducing an element of mastery into the gameplay for players to learn and master.





Stealth (Predatory) Gameplay

In Phobia there is a fundamental shift in stealth gameplay. Whereas in other games stealth is required to accomplish objectives without being detected in Phobia stealth is primarily used to get within striking distance to use CQC or psycho-kinetics. Whereas in other games stealth is needed because the player is too weak to confront enemies, in Phobia stealth is used so the player may leverage confrontation in their favour.

Minor Features

Progression of Abilities

Throughout the campaign of the game the "Spook" will gain access to new CQC weaponry as well as CQC technical abilities. New weapons and CQC techniques will broaden the array of moves and attacks the player will be able to perform, broadening the range of their combat abilities as well as the operational strategies they can carry out.

Dynamic Combat Environments

In Phobia the high value targets will span the globe, with each environment presenting new challenges and opportunities to adjust to and exploit. Environments will dynamically change throughout the progression of the game from environmental and human elements coming into play such as changing weather conditions or destruction to existing features as a result of combat.

Game Characters

Overview

This section describes in brief detail the main character, NPCs, and enemies found in the game world of Phobia.

Playable Character(s)

Overview

The Spook is the only playable character in Phobia, whose movement and actions are controlled through the Xbox 360's controller.

The "Spook"

As a surgical tool of destruction and assassination, the Spook's sole purpose in life is the dirty work for shadow organizations, keeping things clean and quiet. As a highly trained and engineered weapon the "Spook" has a wide array of weapons at his disposal to take down HVTs and any opposition. Specializing in CQC the "Spook" benefits most from getting up close to enemies where his skills can be leveraged in his favour. This is complemented by the Spook's agility and elusiveness, making him nearly invisible on the battlefield.



Figure 1: Main Character Concept

Enemy Character(s)

Overview

The predominant enemy types the “Spook” will face will be military types. Acting in squads enemy will vary and progressively become more advanced throughout the game basic infantry types will be present in every environment.

Basic Infantry

Basic Infantry are the primary opposition the “Spook” will come up against in gameplay. While weak individually their strength lies in operating as a squad. Their difficulty rating initially in the game would be easy, the Spook has little to no problem taking one down in CQC or through Kinetics. However when operating at squad strength or higher their difficulty rating will increase to medium. Their movement is set to pre-defined patrol routes around the environment, only changing when the “Spook” has alerted one or more enemies, causing them to pursuit the player. The interaction between the “Spook” and basic infantry is solely combat and manipulation through psycho-kinetics. In later stages, fear can be induced, incapacitating an enemy, or turning them against one another.



Figure 2: Basic Infantry Concept

Advanced/Heavy Infantry

In later stages of the game infantry types will be better equipped and more knowledgeable of the "Spooks" weaknesses and behavior. Advanced infantry types will be attached to existing basic infantry units improving their combat capabilities. Improved combat capabilities will depend upon the equipment load outs of the advanced infantry. Heavily armoured opponents for example are much harder to take down and take reduced damage from the "Spook's" CQC attacks. Taking these new enemy types down will require the player to utilize their psycho-kinetic abilities or find weaknesses/exposures in their armour they can exploit.



Figure 3: Advanced/Heavy Concept

High Value Targets (Mini-bosses and Bosses)

In every stage of the game the player will be given the sole objective of eliminating between one to three high value targets. These targets are primarily war criminals who have come out of hiding to fight and support the Second Chechen War. As such the CIA is taking the opportunity present in the conflict to take out these targets before they become larger threats to both the European bloc and the world. In-game high value targets will provide greater challenges to the player, their advanced behaviour lends them advantages in combat allowing them go toe to toe with the player character, resulting in intense CQC battles.

Comentado [JF1]: You should list all the targets. Pictures would be helpful for the artist to understand what these bosses should look like.



Figure 4: High Value Target Concept

Non-Playable Character(s)

Overview

Because the environments in which the “Spook” will be dropped into are hot zones all characters present will be combatants. None of the human entities will be allied or neutral towards the Spook.

Comentado [JF2]: No voice over?

Camera

Overview

This section analyzes and explains the decision behind the camera system in Phobia.


Third Person Camera

Phobia utilizes a free third person camera perspective allowing the player to rotate and tilt the camera 360 degrees around the main character. When the player enters into precise aiming/CQC lock-on mode the camera fixes itself in the third person closely behind the main character left or right shoulder (shifting from shoulder to shoulder by depressing the right thumb stick.

Comentado [JF3]: Need distance from player.

Comentado [JF4]: How close is close? Need numbers.

Table 1: Third Person Camera System

| Camera Example | Description |
|---|---|
|  | <p>Default Third Person Camera View</p> <p>The primary camera view for Phobia would be an over the shoulder angle.</p> |



Close Quarters Combat camera view

The third person camera angle would shift to an over the shoulder camera when the player holds down the left trigger to go into precise aiming/lock-on CQC mode

Controls

Overview

This section describes the main controls used to guide the movement and actions of the main character in Phobia.

Default Control Scheme

Utilizing the Xbox 360s controller the player can manipulate the Spook's movement and action in the game world. The default control scheme follows conventional third person controls with the exception of utilizing the right analog stick for the CQC system. The left analog stick controls players movement with the right stick controlling the camera/aiming when not locked on. The d-pad controls

Comentado [JF5]: Where is the rest of this sentence.



Figure 5: Default Control Scheme for the Xbox 360

Gameplay Details

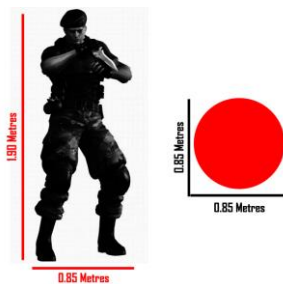
Overview

This section describes the gameplay and mechanics found in *Phobia*, and contains topics describing the mechanics, how they are used, and their implementation into the game.

Introductory Notes

For the purpose of the following game mechanic sections the following statistics are provided to provide a frame of reference for in-game measurements. The player character is **1.90 Metres Tall & 0.85 Metres wide in diameter as depicted below (Side profile on the left/Top profile on the right)**

Comentado [JF6]: Excellent.



Movement and Navigation

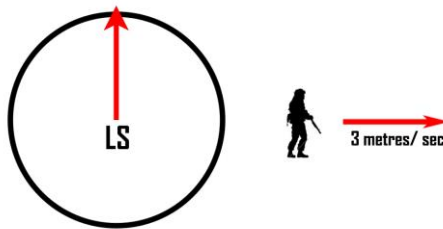
In *Phobia* the player's will utilize the Xbox 360's gamepad to control the primary methods of movement including walking, stalking, and running. The following section will illustrate the required player inputs, gameplay elements, and result of those inputs.

Movement

In game the player has full-control over directional movement and speed of the player character. During all gameplay the player character is centered on the screen in a third person perspective. All movement is performed utilizing the left analog stick along with additional gamepad inputs such as the "B" face button and right trigger. In '*Phobia*' the player has three primary methods of movement through the game environment: *walking*, *stalking*, and *running*.

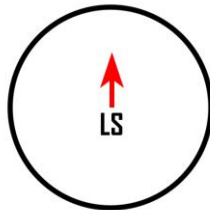
Walking

Walking is performed through solely moving the left analog stick. Fully moving the left analog stick 100% in one direction will make the player character walk in that desired direction. When walking the player character moves at “**3**” metres/second as long as the left analog stick is being pushed in a direction.



Ex: Moving the left analog stick 100% in a direction, this would result in moving in the desired direction at 100% of walking speed

Partially moving the left analog stick in a direction will begin the walking animation, however the player will move at a reduced rate relative to the percentage that the left analog stick is positioned from a “100%” input.



Ex: Moving the left analog partially in one direction, this would result in reduced movement speed

- For example if the left analog stick is only being moved 50% forward then the player character will walk at a rate of 1.5 metres/second ($3 \times 50\% = 1.5 \text{ m/s}$)

Stalking Mode

Stalking Mode, much like walking and running functions off of the same input of the left analog stick. Stalking is the player’s best option for stealth movement. To move in “stalking” mode, the player must press the “B” face button. Pressing the “B” face button on the Xbox 360 controller toggles the player between a standing and crouching stance. While crouched the player is considered to be moving in “stalking” mode.

- It takes the player **0.5 seconds** to transition from standing to crouching.



Toggling between standing and crouching

Stalking mode has two primary features;

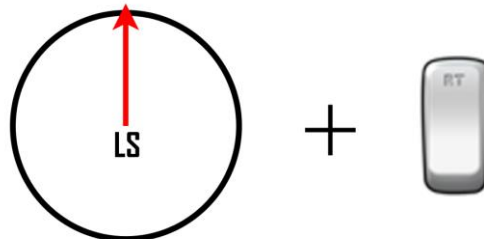
- It reduces the player's profile, increasing their ability to conceal.
 - When crouched the player profile is **0.85 metres tall**
- Reduces the amount of noise produced by the player.

Comentado [JF7]: How much reduction?

There is however one drawback, the player's movement is reduced. While moving in stalking mode the player moves at "**2.25**" metres/second.

Free - Running

Free running is the most quick and efficient method for players to traverse terrain. Utilizing the main movement input of the left analog stick in combination with depressing and holding down the right trigger will make the player character run. As long as the right trigger is depressed and the left analog stick is being pushed in a direction the player will run.



- Ex: The required inputs for free-running

While free-running the player moves at "**5**" metres/second. Upon either releasing the right trigger or ceasing directed movement on the left analog stick the running animation will stop.

- From a full run it takes the player **one second** for the player to come to a full stop

If the right trigger is released and the left analog stick is still being pushed towards a direction the player will cease running and transition into the walking animation. Alternatively if the player is

running and input on the left analog stick ceases but the right trigger is still depressed the player will simply stop running.

Should the player come into contact with an obstacle while free running the player character will navigate the player via a pre-fabricated animation. (This function is described in its entirety directly below in the "Environmental Obstacles" section debajo de. An example of the pre-fabricated animations can be found at the bottom of the environmental obstacles section.)

Environmental Obstacles

Comentado [JF8]: Good section.

The environmental obstacles present within the game world are primarily urban features. The player will face obstacles such as walls, fences, ledges and gaps.

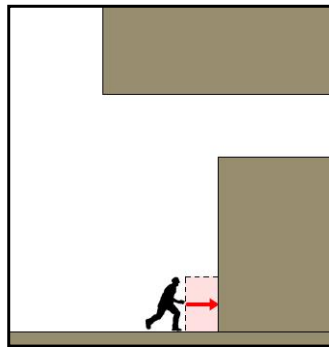
Traversing Environmental Obstacles through free-running

The player may also their free running ability to traverse difficult terrain such as walls, fences, and waist height obstacles.

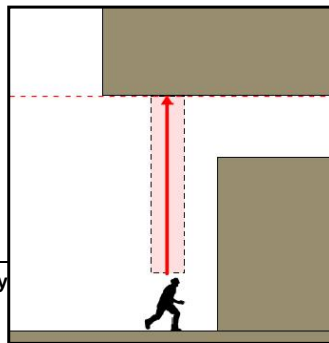
- This utilizes the exact same inputs as the previous free running section

Traversing difficult terrain is performed through pre-fabricated motion captured animations as well as an A.I. system responsible for checking and calculating whether the player character is capable of traversing the terrain.

As the player character is free running the A.I. system will test for obstacles five metres ahead of the player every second (locating the obstacle)

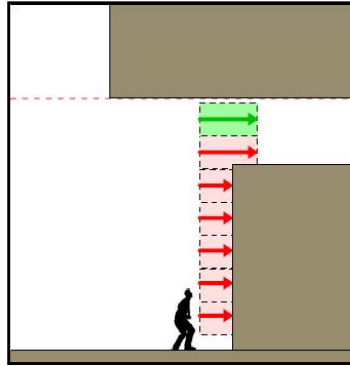


Once an obstacle has been detected the system will run an obstruction trace to determine the vertical space above the player (calculating the max height of the room/environment)



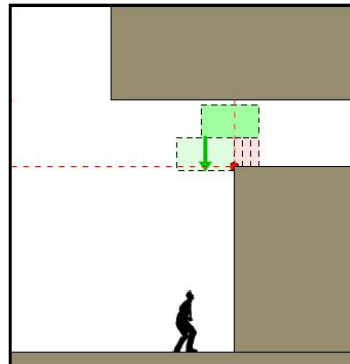
The vertical space is then scanned via a series of hull traces from lowest to highest to find the first unobstructed trace (calculating whether the obstacle can be traversed)

- **The player character can traverse obstacles as tall as “4” metres in height, anything taller is considered impassable**



Next another trace is performed downward to unobstructed trace to determine the height of the obstacle

- Finally another series of downward traces is performed to determine the edge of the obstruction
- **Once the edge of the obstruction is located the system selects and plays the animation which best represents the traversal of the obstruction**



For shorter obstacles, waist height obstacles or a fence, an animation will quickly play through as the player character collides and then quickly navigates over the terrain.

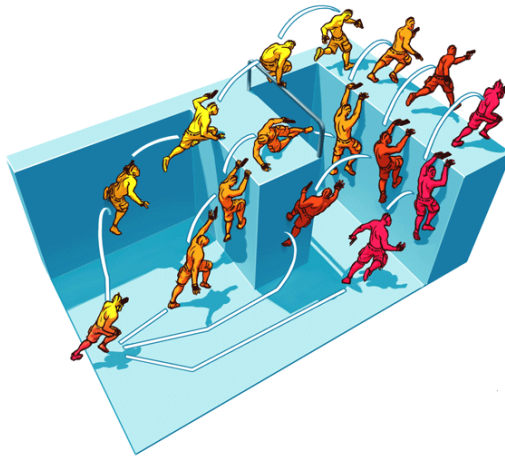
- For small obstructions the player character will quickly navigate the terrain and continue free-running at no loss to free-running speed
- Animation for smaller obstructions take at maximum **1.5 seconds** to traverse



Example animation of traversing shorter obstacles

For larger terrain such as the side of a building or a larger wall, an animation will play through as the player character navigates the terrain, however once the player character reaches the ledge of the obstruction the animation will stop allowing the player to decide whether they want to mount the wall or not.

- This is for the purpose of stealth as in some cases the player may want to wait before proceeding.
- For the player to mount the wall the player simply needs to move the left analog stick up and the animation will finish.



Example animations of traversing larger obstacles

NOTE:

When creating the levels, environmental puzzles and platforming will be utilized to challenge the player.

CAUTION:

In creating levels for the game the movement of Free-Running should be kept in mind. Testing should be done to ensure that a player cannot free-run outside of the boundaries of the level thus breaking gameplay and immersion.

Stealth Mechanics

The following section details how the stealth mechanic functions as well as exemplifying how the player can remain undetected and what will cause the player to become detected.

Stealth is a major mechanic of Phobia; it allows the player to navigate the game environment undetected from enemies. As long as the player is undetected they may roam the environment freely without being pursued or hunted by the enemy A.I.

Elements of Stealth

Stealth in Phobia is based upon three primary variables;

- **Concealment**
- **Sound** and
- **Proximity.**

While the player has the option to not use stealth at all during gameplay there are numerous benefits to moving undetected within the environment.

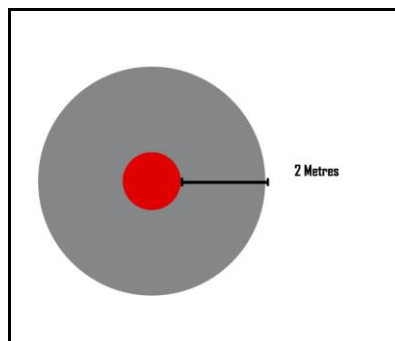
Concealment - Darkness

Concealment directly ties into how well hidden the player is. Concealment in 'Phobia' relies upon hiding in the darkness and breaking the **line of sight (LOS)** with the enemy A.I.

The level of player concealment ties into **the darkness** of the immediate area around the player as well as whether they are in the enemy's **LOS**.

The immediate around the player character can be considered as a radius of 2 metres from the surface of the player character. (The red circle represents the space occupied by the player character.)

- The darker the area around the player character the better concealed they are

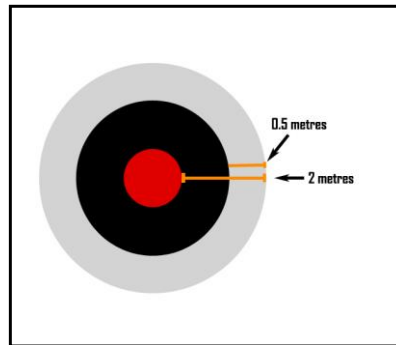


If the **2 metres radius** around the player character is completely dark with zero light then the player character's **concealment level is at 100%**

- The surface area of the darkness around the player character is calculated as: $SA = ((radius^2) * \pi) = ((2 \text{ metres}^2) * 3.14159) = 12.566 \text{ metres squared} = 100\% \text{ concealment}$

In instances when light begins to encroach within the 2 metres radius of the player character the concealment level will decreased proportional to surface area the light is taking up

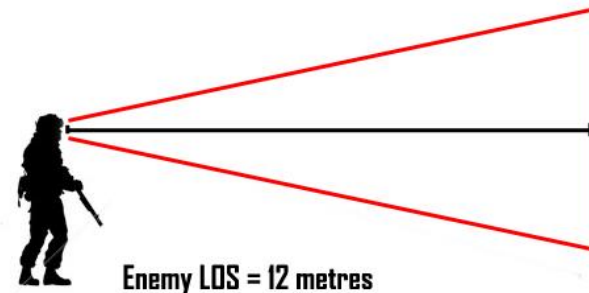
- In this case the player is surrounded by light, reducing the darkness around the player character to 1.5 metres radius. The level of concealment can then be calculated as:



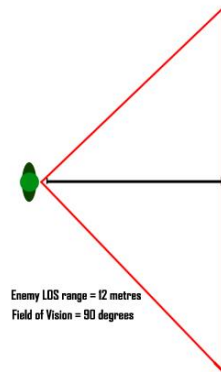
- $SA = ((radius * 2) * \pi) = ((1.5^2) * 3.14159) = 7.069 \text{ metres squared}$
- Level of concealment = $(7.069/12.566) = 56\%$

Concealment – Line of Sight (LOS)

The enemy's **LOS** can be illustrated as a cone shaped volume, beginning at the enemy's eye line proceeding outwards 12 metres at a 90 degree arc. This line of sight moves wherever the enemy's head is facing, mimicking human sight and peripheral vision. If the player is within the enemy's **LOS**, they can be detected



Example: Side profile of an enemy's LOS



Example: Top profile of an enemy's LOS (90 degree field of vision)

In Phobia an enemy's primary method of detecting the player is through their line of sight (LOS).

Being visually detected is based upon two factors,

- **The concealment level of the player and**
- **Whether they are within the enemy's LOS**

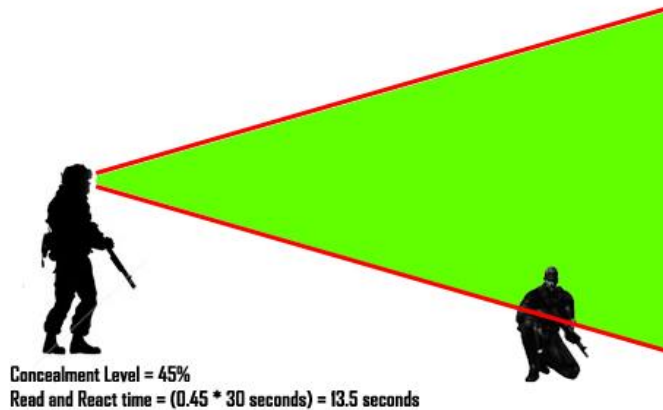
As long as the player character's profile is outside of enemy LOS then they cannot be "visually" detected.

If the player is within the enemy's LOS they must rely upon their concealment level to remain hidden or break the LOS

If the player's concealment level is 100% the player character is considered invisible and cannot be detected visually by the enemy even if they are in the enemy's LOS

If the player's concealment level is below 100% enemies can detect the player

- Should a player remain in the enemy's LOS while their concealment level is below 80% there is one calculation to how long it will take before the A.I. "Read and Reacts" to the player thus detecting them
- **At any level of concealment below 100% the time to "Read and React" is equal to the concealment level times 30 seconds**



As an example of Read and React Timing, if the player's level of concealment is at 45% it would take a total of 13.5 seconds for the A.I. to register and detect the player

The only option to avoid such situations is for the player to break the LOS or move into a darker area.

REQUIREMENT:

There must be ample dark areas for the player to utilize in traversing the environment and engaging the enemy

Detection – Enemy Behaviour

Throughout the game of Phobia the player will come into contact with the enemy A.I. Before the player has been detected basic enemy units will move along pre-set patrol routes in each level. As long as the enemy A.I. alert level has not been raised enemies will continue repeating their patrol routes.

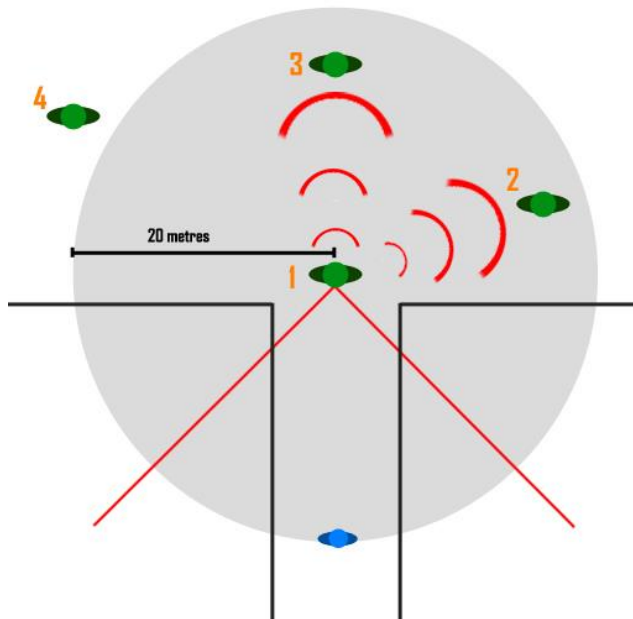
- Basic enemy units patrol their routes at a walking pace (2 metres/second)

If and when the player has been detected there is a hierarchy of priorities that the enemy A.I. immediately follows; once an enemy has confirmed the presence of the player its alert level will be raised and its **initial priority will be to engage and eliminate the player.**

- In doing so the enemy A.I. will engage (fire upon) the player and take cover.
- In combat the enemy A.I. always attempts to attack from cover

The enemy's next priority will be to **alert other enemy units in the vicinity.** After **10 seconds** of being in cover the enemy unit will alert other enemy units in the immediate vicinity of the player's presence.

- All enemies within a **20 metre radius of the initial player detection will be alerted** to the player's presence and move towards the location to assist and engage
- This time span between initial and expanded detection give the player time to engage and eliminate the enemy before back up is called. This is crucial as the enemy is much more powerful en masse.

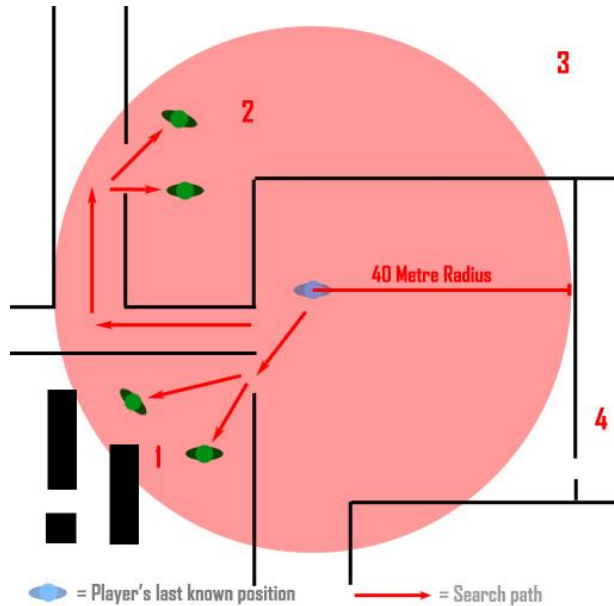


As illustrated in the diagram above, the player character (blue) has been detected by an enemy unit (1). As soon as the player has been detected, enemy units (2) & (3) have been alerted to the player's presence as they fall within the 12 metre radius of the initial A.I. unit which detected the player. Enemy unit (4) however has not been alerted as it falls outside of the 12 metre radius

These additional enemy units will have the same top priority of engaging and eliminating the player. Alerts can also be passed on from enemy to enemy if they are in close proximity (5 metres). Enemies within the 20 metres radius are able to pass on the alert to enemies outside of the radius if there are within five-metres of one another. There is no limit to how many enemies are alerted at once. The number is derived from the position of enemies at the time the alert is first raised.

As long as the player is within the enemy LOS or is actively engaged with the enemy the alert will persist. Should the A.I. enemy lose LOS with the player character or be eliminated by the player character the alert level will decrease. During this period of time (**2 minutes**) any remaining enemy units that have not been eliminated will actively search out the area the player character was last seen as a group.

- This encompasses a 40 metre radius of the last known position (as pictured below)



In the diagram above we can see two squads of guards (in green) searching the area where the player was last seen. Areas 1 and 2 are being search as they fall within 40 metres of the last known position. But areas 3 and 4 are not being search as they are out of range.

- It is during this time that the player must either remain undetected or eliminate those searching for him

After 2 minutes has passed if the player has not been detected again or the enemies have been eliminated then the alert status will be lifted

- If the enemies were not eliminated they will return to their previous patrol routes

Close Quarters Combat (CQC) Mechanic

The combat in Phobia follows standard stealth action gameplay with an innovative twist. The combat system is focused upon Close Quarter Combat attacks and combo utilizing bladed weapons. These attack and combos are primarily input through the right analog stick, mimicking martial art and combat movements. This combat system is designed to put CQC at the forefront of the game, making combat intuitive and fun for players to pick up and play, as well as provide an element of mastery for players to achieve,

General Notes

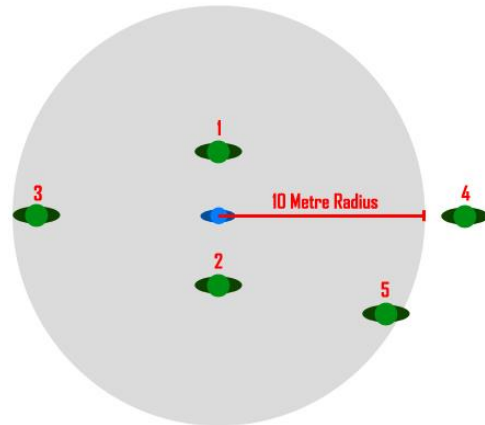
- All combat is weapon based, the player character at all times has a knife in his possession
 - At times some attacks may not involve the use of a knife but the player always has one at their disposal
- Health
 - Health in Phobia can be calculated as "Hit Points"
 - Initially in the game the player character's health is at 150 hit points
 - A basic enemy's health is equal to 60 hit points.

Initiating Close Quarters Combat

When the player comes into contact with enemies and want to engage they must Initiate CQC Mode; this is performed through pulling the **Left Trigger** on the Xbox 360's controller once. This will put the player characters into the CQC Stance, as pictured below.



In this stance, the player is in an optimal position for CQC, this relaxed stance allows for quick maneuvering and evasion. **To initiate CQC the player character must be within 10 metres of an enemy.**



The diagram above illustrates a top down view of the distance and range of CQC. The player character (blue figure) is capable of initiating and engaging enemies (green figure 1, 2, 3, 5) which are within the CQC engagement range. The player is unable to target or engage enemy # 4 as it is out of range.

When CQC is initiated the closest enemy to the player character is targeted. While in CQC Mode the default third person camera shifts closer to the player character to an over the shoulder camera perspective (as exemplified below)



¹ Screen Capture from Dead Space 2

While CQC is initiated the targeted enemy is always centered in view

After CQC has been initiated the player can quickly switch between targets utilizing the Xbox game pad bumpers (Left Bumper + Right Bumper)

- Hitting the **left bumper** will target the next closest enemy to the player character's left
- Hitting the **right bumper** will target the next closest enemy to the player character's right

Movement in Combat

When CQC is initiated the player character's movements are modified, the player is unable to free run and movement is constrained to lateral (left and right) movement around the targeted enemy.

- Lateral movement is performed through moving the left analog left or right
- Lateral movement is a quick side step animation lasting 0.35 seconds
- A lateral movement in game will move the player 0.50 metres
- Lateral side steps can be performed subsequently with no cool down between animation

The player also gains the ability to quickly evade incoming attacks by performing a combat roll. **A combat roll can be performed by hitting the "A" face button in combination with a direction on the left analog stick.** Upon completing this action the player character will perform a combat roll animation in the player's desired direction.

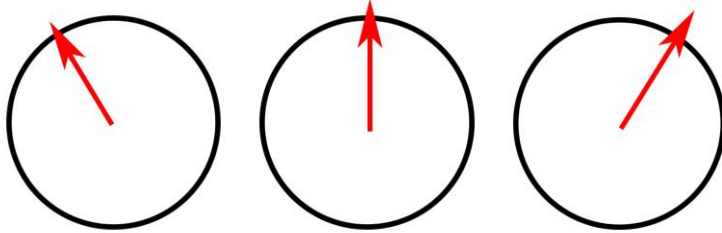
- The animation takes 1.15 seconds to complete from roll to standing stance
- The combat roll will move the player 1.5 metres in the direction of the roll
- When the animation finishes the player character will quickly resume the CQC stance faces the last targeted enemy

The player cannot move or turn until an attack animation has completed

- In the event that both movement and attack movements are being input at the same time, movement will always take priority first

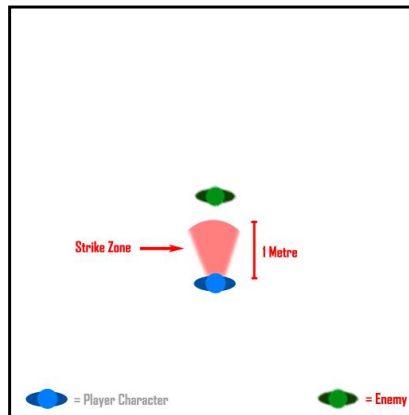
Knife CQC - Basic Attacks

Once the player has locked onto an enemy and initiated CQC as illustrated above players can then attack with their character to deal damage and kill enemies' in-game. To initiate a single, basic attack the right analog stick must be quick tapped towards an enemy as illustrated below.



These basic inputs all result in a forward stabbing animation and attack. Once this analog movement is completed the character will perform a basic knife thrust attack

- **The range of a basic knife thrust is 1 metres**
 - The range begins from the player's center point
 - The player character does not move as a result of this attack
- **The diagram to the right illustrates the strike zone in front of the player. In this case the enemy is just out of range of a basic attack**



The illustration to the right indicates where on the enemy model thrust attacks target. Hit detection on the enemy is based upon polygonal hit detection (Discussed below under Hit Detection)

- The damage dealt from landing a basic knife thrust is **5 hit points**
- The animation and length of a basic attack is **0.60 seconds**.

Basic attacks can subsequently be input as there is **no cool down** for the attack. However basic attacks can only be input as quickly as the animation can play



A basic attack can be cancelled or interrupted by:

- A landed attack by an enemy
- Performing a combat roll

HIT DETECTION – HITS AND MISSES

In Phobia, hit detection is based off of PER POLYGONAL HIT DETECTION². The collision of attacks is incredibly accurate as hit detection can calculate exactly what area/section of the body has been hit. From this the game system can calculate the severity of the attack and utilize this data to accurately portray damage

- This is significant as a major focus of CQC knife tactics are to target specific areas on the body to eliminate immediate threats

In-game this accurate hit detection will allow the enemy A.I. system to perform incredibly realistic when reacting to damage

- If the player targets a specific extremity and is successful in attack and damaging it then that extremity will be rendered inert and cannot be used by the enemy A.I.

Additionally if the player has managed to damage a vital organ/artery the enemy will begin bleeding out

- Enemies bleed out at 1 hit point/second

CQC Defense – Deflection

Player Blocking

In combat both the player character and enemy A.I. have the ability to deflect and counter attacks

- This defense system is based upon timing and reflexes

When an opponent is beginning their attack if the player (or enemy A.I.) is capable of timing their deflection, the attack will be deflected opponent will be left off balanced and open for attack

- **Players must press the “X” face button on the Xbox 360 controller to perform a deflection**

A player can only deflect the attack after it the attack animation is between **40 and 65% complete**

- At this point in the animation it is too late to cancel out the animation yet early enough to stop it before coming into collision with the player

Because of the speed of attacks in-game the player has fractions of a second to react to an attack. The deflection animation last 0.50 seconds, as such performing a deflection too early will result in the player being hit as the deflection action is over

- Performing a deflection too late will not stop an attack either

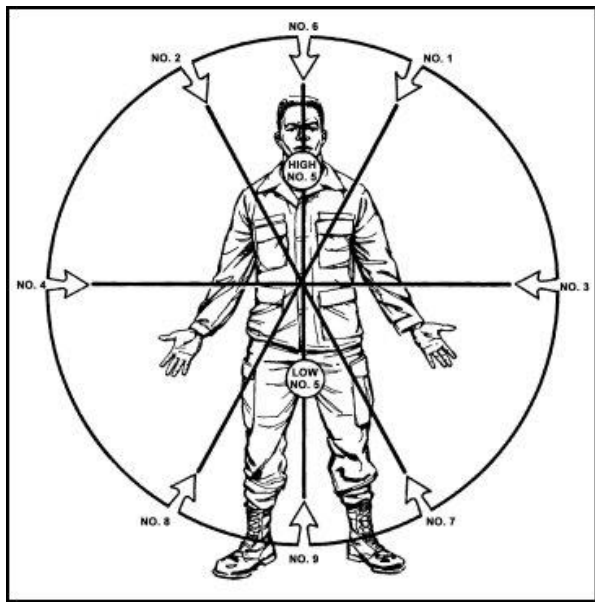
² Per Polygonal hit detection calculates hit detection based off of calculating the collision of polygons between 3D models

In the event that both the player and enemy are attacking at the same time, both attacks will be deflected and both the player and the enemy character will be pushed back 1.5 metres.

KNIFE CQC – TARGETING VITAL AREAS – QUICK, EASY, EFFICIENT

In addition to basic attacks Close Quarters Combat corners itself upon quickly and efficiently eliminating threats. As such while in Close Quarters Combat, the movement of the right analog stick will accurately depict the strike path of a knife slash and/or thrust.

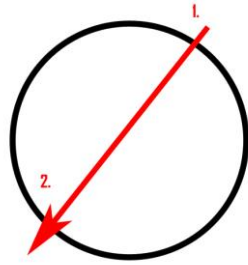
When the player wants to attack with the knife they must move the right analog stick across the game pad mimicking the movement and angle of the attack they want to perform. This can be also depicted with an angle of attack chart as picture below as it is much more effective for the player to attack vital areas on the enemy's body. Hitting vital areas of the enemy will result in significantly more effective attacks resulting in much higher levels of damage.



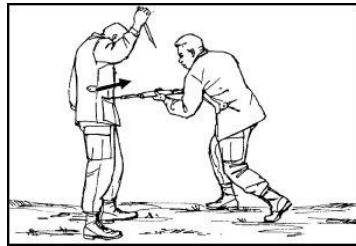
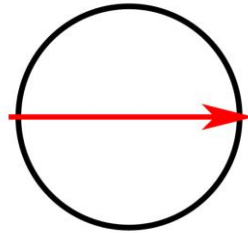
Basic Attack List:

- **Attack No.1** – A downward diagonal slash, stab, or strike toward the left side of the defender's head, neck, or torso. **This would be performed by moving the right analog stick in a similar motion as depicted below.**

³ <http://www.globalsecurity.org/military/library/policy/army/fm/3-25-150/ch7.htm>



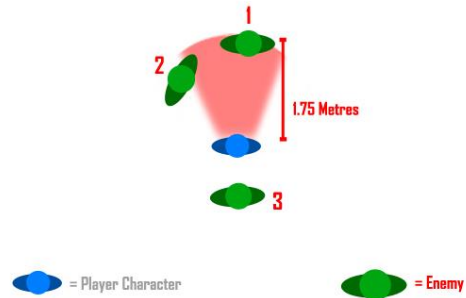
- Point one on the upper right of the diagram represents the origin of the attack, with point two on the lower left of the diagram representing the end point of the attack.
- **Attack No. 4** (Refer to diagram above) – a horizontal slash across the torso of the defender. **This attack would be performed by moving the right analog stick from left to right.**



- **The type of attack and animation required for the attack are determined by mapping the origin of the attack with the endpoint of the strike.**
- The range of these targeted knife attacks range between 1 – 1.75 metres (As illustrated below)

⁴ For the purpose of illustrating the type of attack this diagram was included. This is not a weapon which will be available in-game. In-game the player will be utilizing a knife.

⁵ For the purpose of illustrating the type of attack this diagram was included. In the picture the figure is utilizing a rifle with bayonet, this is not a weapon which will be available in-game. In-game the player will be utilizing a knife.



The diagram above illustrates the strike zone of a targeted attack. Targets 1 and 2 will be hit but target 3 (behind the player) cannot be hit.

- When performed these attack will move the player 0.50 metres forward in the direction of the enemy.
 - Conversely the enemy is pushed back 0.50 metres with each connecting attack.
- If a knife strike is landed to one of these vital areas on the body the damage dealt is 15 hit points
- Much like a basic attack there are a few cases in which a targeted attack can be interrupted by the following actions:
 - Combat roll
 - The player character is hit and or attacked
 - The player switches targets

Knife CQC – Grips

In-game the player will have the ability to switch the grip the player character is utilizing on the knife.

Switching grips is done by clicking the right stick in. This does not fundamentally change gameplay; it instead modifies the player's speed and attack damage.

- Each time the right stick is clicked in the grip will change, rotating through the available grips: standard saber grip and reverse saber grip



Standard Saber grip (1.05% modifier to damage)



Reverse Saber Grip (1.15% modifier to speed/animation speed)

Knife CQC - Advanced Techniques

Advanced CQC knife techniques represent the combo system allowing the player to string together strikes to vital target areas, eliminating enemies in seconds. To perform advanced CQC techniques the player must input a series of directional movements on the right analog stick exactly like basic and targeted attacks.

Techniques are performed by correctly stringing together successive attack movements in an allotted time frame. **A comprehensive list can be found below under the "Player Abilities" section.**

- Combos are initiated by inputting the first attack in a series.
- If the attack is successful the player will be able to attempt to string together a combo
- If the attack is unsuccessful then the initial strike will simply be treated as a blocked attack.
- As soon as the first strike in the technique is landed the player will have a set window of time (**0.50 seconds**) in which they can complete the next attack in the series
- As each attack is successfully completed the animation will play for that attack as well as the damage being dealt for each attack

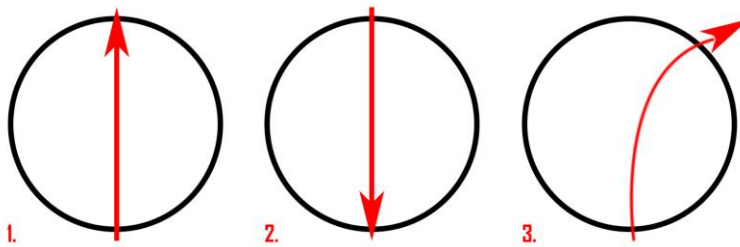
⁶ For reference, I am not the person holding the knives above.

- If all the strikes in the technique are completed, in the correct order and in the time frame then the final strike will land causing massive damage
- If at any point the combo is interrupted or left unfinished then the player will return to the CQC stance

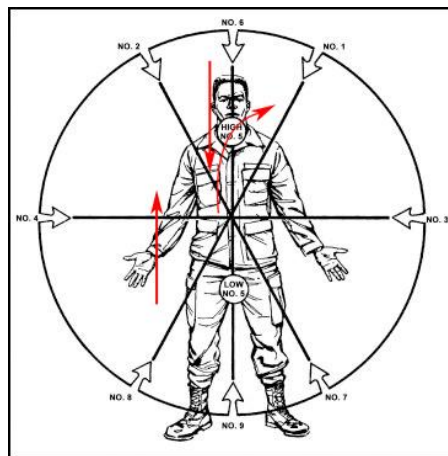
If properly performed in the appropriate time frame the attack will result in an instant kill

Attack Example – Three Strike Swipe

- As an example of an advanced CQC technique the player wishes to complete the three strike swipe.
- The attack is a quick three attack combo targeting the opponents arm, neck, and chest.
- To initiate the technique the player must land the first attack which is an upwards slash across the opponents right arm using the **reverse saber grip** (See below)



The two follow up attacks, inputs 2 and 3, coincide with the attack stabbing downwards into the enemies jugular followed up by outwards slash (left to right) across the enemy's neck. The target areas are depicted below.



- This attack combo can only target against one enemy at a time

There are three additional variations of advanced CQC techniques which the player will have the ability to utilize in-game. Summaries of these techniques are found below but most are elaborated on in the ability list located at the end of the mechanics section.

Sentry takedowns

Sentry takedowns are instant kill attacks which can be performed if the player can approach an enemy from behind undetected. Utilizing the same inputs as the combat system the player must depress and hold the left trigger to solely lock onto the desired target.

- When close enough the player initiates the technique much like an advanced combo, requiring the player to input a series of movements on the right analog stick within (1.5 seconds)
- If a sentry takedowns is unsuccessful the player will have been detected

Disarms

When initiating in CQC with an enemy the primary focus will be disarming an enemy of their weapon (handgun, shotgun, assault rifle, etc.,) As such when in CQC the player at times will be prompted to knock the weapon away or use the weapon against the enemy.

After successfully landing an initial strike the player the player has window of opportunity in which they may disarm their opponent. The window of opportunity is 2 seconds long in which the player may press the "X" button on the Xbox controller. After successfully pressing "X" in the window of opportunity a quick animation will play (lasting 1-3 seconds long) in which the player character will disarm the enemy of their primary weapon.

Enemy Behaviour CQC

- While the enemy A.I. is equipped with firearms with range, when in close proximity to the player character they will resort to using melee and CQC attacks
- When the player character is within 5 metres of an enemy, the enemy will stop firing and move directly to the player to engage
- A basic enemy's melee and CQC is not as expansive as the player characters but none the less is capable of inflicting damage
- A basic enemy's melee attack primarily consist of using their firearm as a blunt instrument to attack the player
 - The damage dealt by a basic melee attack is 10 hit points
 - All enemy melee animations last 0.85 seconds
 - If a hit is successful the player character is knocked by 0.65 metres from their original position where they were hit

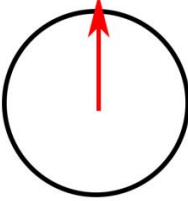
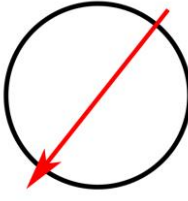
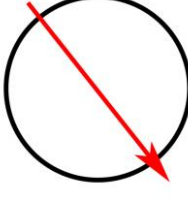
- The range of their attacks are 1.05 metres in reach
- Basic enemies can perform these melee attacks in succession, but only as quickly as the animation plays

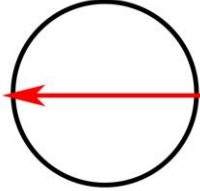
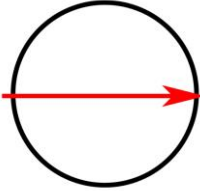
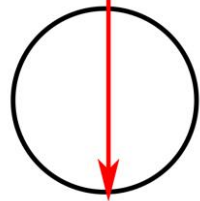
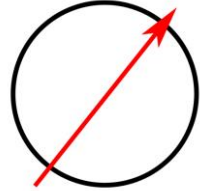
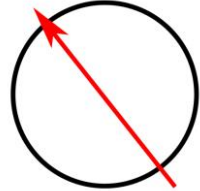
Player Abilities – CQC Basic & Adv. Techniques

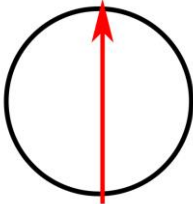
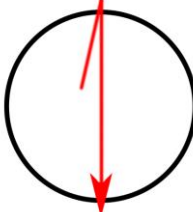
Below is a comprehensive list of the player's combat capabilities as well as the required input to perform these techniques.

Basic CQC Attacks

Table 1: Basic CQC Attacks

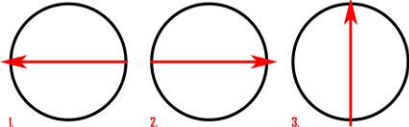
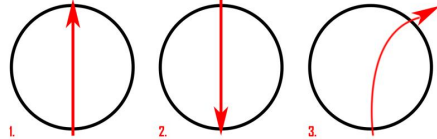
| Ability | Description | Damage | Required Input |
|---|---|---------------|--|
| Stab/ Thrust | A jabbing, lunging, or punching attack directed straight towards the defender's front | 5 hit points |  |
| Downward Diagonal Attack (Right) | A downward diagonal slash, stab, or strike toward the left side of the enemy's head, neck or torso | 15 hit points |  |
| Downward Diagonal Attack (Left) | A downward diagonal slash, stab, or strike toward the right side of the enemy's head, neck or torso | 15 hit points |  |

| Ability | Description | Damage | Required Input |
|--|---|---------------|--|
| Horizontal strike (Right to left) | A horizontal attack to the left side of the defender's torso in the ribs, side, or hip region. | 15 hit points |  |
| Horizontal strike (Left to Right) | A horizontal attack to the right side of the defender's torso in the ribs, side, or hip region. | 15 hit points |  |
| Vertical Strike(Down) | An attack directed straight down on the enemy | 15 hit points |  |
| Upward diagonal strike (Right) | An upward diagonal strike towards the enemy's lower left side | 15 hit points |  |
| Upward diagonal strike (Left) | An upward diagonal strike towards the enemy's lower right side | 15 hit points |  |

| Ability | Description | Damage | Required Input |
|-----------------------------|--|---------------|--|
| Vertical Strike (up) | An attack directed straight up-for example, to the defender's groin | 15 hit points |  |
| Power Assist Strike | If the opponent's guard is down this is a double handed power slice down the opponents chest | 20 hit points |  |

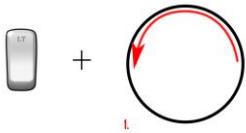
Advanced CQC Attacks

Table 2: Advanced CQC Attacks

| Ability | Description | Damage | Required Input |
|-----------------------------------|---|----------------|--|
| Three Swipe Strike | First strike across the wrist, reverse strike across the opponents throat, knife thrust into the sternum | 100 hit points |  |
| Up-Down-Up (Ice Pick Grip) | Upwards strike against the opponents wrist, downwards stab into the enemy's thigh, power assisted takedown against the enemy's neck | 105 hit points |  |

| Ability | Description | Damage | Required Input |
|--|--|----------------|----------------|
| Wing Chun Block to Strike | Wing Chun block utilizing the knife (left wrist), slice across the body across the enemy's throat | 100 hit points | |
| Strike – Spin – Finish (Ice Pick Grip) | Upwards slice against the opponent's wrist, utilizing the knife's blade guide the opponents right arm down and across their chest, taking the enemy's back, follow up with a downward stab into the chest cavity | 125 hit points | |
| Block to downward stab finish (Ice Pick Grip) | Striking an enemy on the left the player wraps up the enemy (imagine a hug), reaching up and around the chest, then stabbing downward into the enemy's artery (near collar bone) | 95 hit points | |
| Lethal Sentry Takedown (Neck) | The player approaches the enemy undetected from behind. Grabbing the enemy from behind the player then delivers a lethal strike to | Instant kill | |

| Ability | Description | Damage | Required Input |
|---|---|------------------------------|----------------|
| | the enemy's neck. | | |
| Lethal Sentry Takedown (Kidneys) | The player approaches the enemy undetected from behind. Grabbing the enemy around the neck with his left arm the player delivers a lethal strike to the enemy's kidney, causing the enemy to go into shock. | Instant kill | |
| Lethal Sentry Takedown + Disarm | The player, approaching from behind grabs the enemy on the left shoulder while at the same time, lacerating the enemy's left arm at the elbow joint. This first movement severs the enemy's control over their right arm, preventing them from firing their weapon. Afterwards the player delivers a lethal blow to the enemy's chest cavity. | Disarm + Instant kill | |
| Lethal Sentry Takedown | The player, approaching undetected from behind quick grabbing the | Instant kill | |

| Ability | Description | Damage | Required Input |
|---------------------|---|-------------|---|
| | enemy's head and applying sufficient torque to snap the enemy's neck. | | |
| Non-Lethal Takedown | The player approaches from behind putting the enemy into a "Sleeper Hold" until the enemy is rendering unconscious. | Neutralized |  |

Weapons

CQC Weaponry

Table 1: Weaponry

| Weapon | Description | Damage |
|--------|-----------------------------|------------------------------|
| Knife | Standard K-Bar Knife | Dependent Upon Attack & Grip |

CAUTION:

[Use For Potentially Harmful Issues]

REQUIREMENT:

[Use For Non-Negotiable Requirements]

Items

- There are health pickups scattered throughout the environment which the player character can utilize.
- When the player character comes into contact with the health pickups they are instantly healed
- They cannot be saved as there is no inventory system in the game

Game Modes

Overview

This section of the document details the single player campaign of Phobia.

Single-Player Game

The single player campaign is the only game mode available in Phobia. The player takes on the role of a CIA black ops operative working in an active warzone to eliminate high value targets (HVTs). As the player progresses through the single player campaign they will move to different regions of the warzone following the conflict's path as well as the movement of his targets.

Story

You play as "Spook" a CIA Black Ops Operative, responsible with taking out select high value targets in Chechnya, during the second Chechen War taking place between late 1999 up until mid-2009. This foreign intervention is performed in an attempt to prevent the conflict between Russian forces and Chechen Separatists from getting worse. As such the CIA is taking the opportunity presented in this conflict to target high value war criminals that are coming out of hiding to support and actively fight in the Chechen War.

Story Breakdown

As the player progresses through the single player campaign they must navigate their way through the environments to each target. Played in a semi-open world environment players will have the choice of completing their objectives stealthily, utilizing the game's stealth mechanics or through brute force, eliminating the opposition (enemies protecting the high value targets) through CQC or evading them utilizing the game's stealth mechanics.

The story will be communicated to the player via cut-scenes in-between each stage as well as objectives given to the player during gameplay. Cut-scenes convey the status of the on-going conflict to the player to give them a frame of reference as to where they are in the Chechen conflict as well as the progress and realities of the war.

The story begins with the "Spook" beginning his mission at the outset of the war in 1999, just outside of the Chechen Capital Grozny, where the majority of urban action occurs. In the initial three stages of the game the player's objectives are to eliminate high value targets (HVTs) as well as find a way into the city under the cover of the siege. The end of the third stage will close out with the player character entering the city of Grozny just as the siege of Grozny begins.

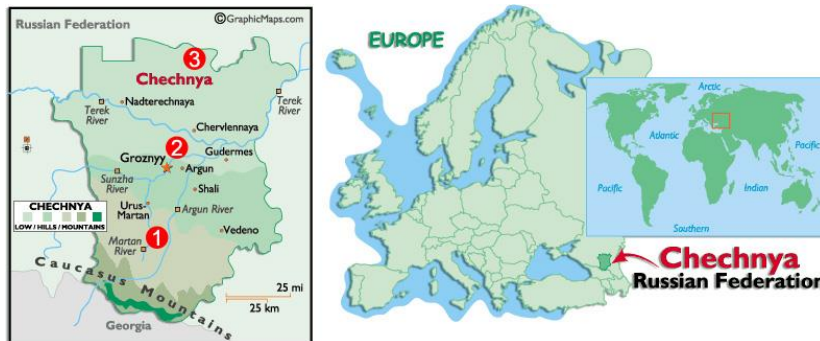
Single Player Progression

The section of the design document details how the player progression through the single player campaign.

Single Player Campaign

The player's progression through the single player campaign is performed stage by stage. The entire single player campaign is broken into three different geographic areas encompassing the three major areas of conflict in the Second Chechen War. These three geographic regions are further broken down into three sub-stages, encompassing the nine stage single player campaign. *A comprehensive list of all stages within the game can be found below under: **Stages and Single Player Time Projections.***

The three geographic regions the player operates within will be: (1) **Outside of the Chechen Capital**, (2) **The Chechen Capital (Grozny)**, and lastly (3) **the North Caucasus**. These are depicted below.



In each stage the player will start in the game environment given the sole task of eliminating the high value targets present within the current stage. The player is given full freedom on how they complete their delegated objective.

The number of targets will change depending upon what stage the player is currently in. As the single player campaign progresses the number of targets present within an area will increase to challenge the player and provide a variety of gameplay options.

Stages and Single-Player Time Projections

The following chart is a projection of the expected gameplay time for each stage of the game on “normal difficulty” broken down both by each stage as well as a cumulative total at the end

| Stage | Pacing (Based on enemy numbers and composition) | Number of High Value Targets (HVT/Objective) | Projected Gameplay Time (Minutes) |
|------------------------------|---|--|-----------------------------------|
| 1-1 (Outside of the Capital) | <ul style="list-style-type: none"> Low intensity 15 enemy unit types Basic enemies | One High Value Target (HVT) | 15 – 25 Minutes |
| 1-2 (Outside of the Capital) | <ul style="list-style-type: none"> Low intensity 15 enemy units types Basic enemies | One HVT | 30 – 45 minutes |
| 1-3 (Outside of the Capital) | <ul style="list-style-type: none"> Moderate intensity 30 enemy units Basic enemies Mini-boss | One HVT | 30 – 45 minutes |
| 2-1 Grozny | <ul style="list-style-type: none"> Low intensity 45 enemy units Basic enemy unit types | Two HVTs | 45 – 50 minutes |
| 2-2 Grozny | <ul style="list-style-type: none"> Moderate intensity 85 enemies Basic and Heavy unit types Mini-boss | Two HVTs | 50 – 60 minutes |
| 2-3 Grozny | <ul style="list-style-type: none"> High intensity 100 enemy units Basic and Heavy unit types Boss Fight | Three HVTs | 50 – 60 minutes |
| 3-1 Northern Caucasus | <ul style="list-style-type: none"> Low Intensity 45 enemy units Basic enemy units Mini-boss | Three HVTs | 45 – 50 minutes |
| 3-2 Northern | <ul style="list-style-type: none"> Moderate intensity | Three HVTs | 45 – 50 minutes |

| | | | |
|-----------------------|---|------------------------------|--------------------------|
| Caucasus | <ul style="list-style-type: none"> • 60 enemy units • Basic and heavy enemy units • 2 mini-boss fights | | |
| 3-3 Northern Caucasus | <ul style="list-style-type: none"> • High intensity • 100+ enemy units • Basic and heavy unit types • Mini-boss • Boss fight | One HVT | 50 – 60 minutes |
| Total | | 17 High Value Targets | 360 – 445 minutes |

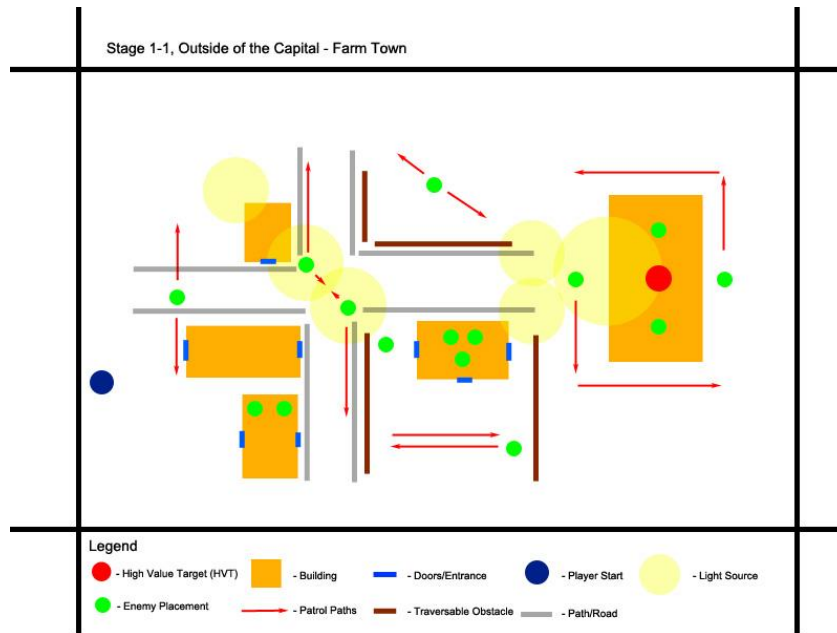
Stage Examples

Below are two example stages which can be found within the single player campaign. Each example is a top-down view of the stage depicting the player start, objectives, enemies, and obstacles.

The two stage choices represent two significantly different gameplay experiences. The first stage exemplified, Farm Town, is the first level of the single player campaign. This level is exemplified to convey how mechanics and pacing are introduced to the player in the first stage of the game.

The second stage choice, Grozny Stadium Siege, represents one of the harder levels in the campaign, representing one of the largest environments in scale as well as one of the highest intensity levels in the campaign. This level exemplifies advanced challenges and gameplay decisions must make in the process of completing their objectives.

Stage 1-1 Farm Town



Mission Description & Stage Layout

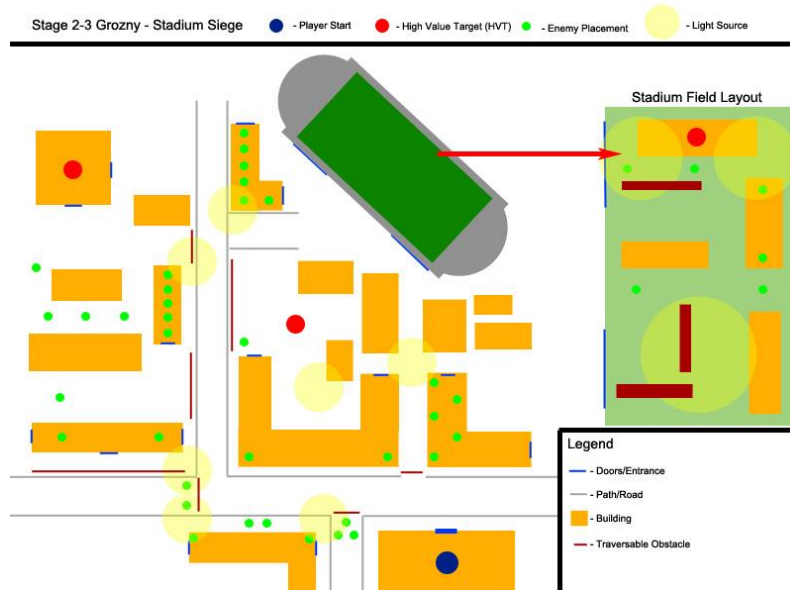
- The “Farm Town” is the first level in the single player campaign. The size of the level itself is fairly small as the focus of the level is to teach the player the fundamental mechanics and introduce them to the game world.
- After a brief intro-cinematic setting the narrative and stage the player is given his first and sole objective for the level which is to eliminate a single High Value Target in the barn at the end of the path.
- While the barn is on the other end of a relatively small town the town poses two main challenges to the player, teaching and then implementing both stealth techniques and CQC combat techniques
- When the level begins the player is already fully concealed within the forest with a lone guard clearly visible
- In this first situation the player is introduced basic stalking/stealth movement and silent takedowns
- Upon taking down the first guard the player is encouraged to sneak their way to the barn around the out skirts of the farm town through a quick cinematic showing the number and movement of guards patrolling around the small town.

- Along the outskirts of the town there are relatively few enemies present allowing the player to stealth and reinforce silent takedowns
- After this cinematic the player is introduced to the HUD elements
 - To convey the information provided by the HUD as soon as the player enters the proximity of a light source or instigates the alert level the game will briefly pause to introduce the different HUD Elements of “**Level of Concealment**” and “**Level of Alertness**”.
- Throughout this initial level the player has the choice of forgoing stealth for action if they desire, but their knowledge of combat techniques is limited thus stealth is heavily suggested.
- Upon reaching the barn the player has the options of either taking down the two guards patrolling around the barn or sneaking in.
- Regardless of the player’s choices throughout the level, once they enter the barn with the High Value Target and two enemies a cinematic will play. This cinematic will transition to CQC combat, in which the player will be taught more combat mechanics, such as changing the target, as well as linking together more advanced combat techniques.

Enemies and Obstacles

- There are minimal enemies and obstacles present within the level.
- There are 15 basic infantry units present within the level patrolling or idling within buildings.
- In addition there is one high value target present with the barn; this HVT has the same health and attack methods of the basic infantry.

Stage 2-3 Grozny - Stadium Siege



Mission Description & Stage Layout

- At this point in the game the Chechen conflict has reached the capital city and the player must eliminate three High Value Targets under the cover of a siege.
- Stadium siege is a level found deep within the single player campaign, approximately 60-70% progression.
- By this point in the single player campaign the player has a fairly solid grasp on the game mechanics as well, as such the level is much more open providing the player with a number of gameplay options and decisions
- The player is challenged with three HVTs placed around the game environment requiring them to leverage both combat and stealth to achieve their objectives.
 - Initially only two HVTs can be targeted, once both are eliminated the stadium becomes accessible
- While the player is actively seeking out his/her targets the capital city and stadium will be under siege from Russian forces
- After the first HVT is eliminated a second enemy force will be introduced to the game environment (Russian Military) who will be aggressive to both you and the Chechen Rebels
- These forces come from the South-Eastern corner of the map and are 50 units in number

Enemies and Obstacles

- Following the progression of difficulty in the game there are many more enemies and new enemy types such as the heavy and mini-bosses have been introduced into gameplay

- Additionally in this level a boss is present providing the player with a much higher intensity gameplay

Progression of Difficulty

As the single player campaign progresses the difficulty will progressively escalate to challenge the player and force them to utilize the skills and mechanics they've learned (Stealth and Combat). These skills and mechanics will be put to the test through increasing enemy presence and enemy unit type variety.

Following the Chechen conflict, the environments the player operates in will have more enemies, forcing the player to think strategically about their actions as to not get quickly overwhelmed.

In addition to the number of enemies present within each environment, the variety of enemies will also change, forcing the player to modify their tactics. In the earlier levels of the single player campaigns only basic infantry will be present, while individually weak their strength relies upon numbers. However, upon entering the second stage of the single player game heavy enemy unit types will be introduced into gameplay, representing stronger enemies the player must deal with. While the behaviour of the heavy enemy units are similar to those of the basic infantry they benefit from higher levels of health as well as heavy weaponry dealing higher damage to the player.

The last two varieties of enemies which are introduced into gameplay to progressively and modify difficulty are mini-boss and boss type character. These mini-boss and boss types are High Value Targets (HVTs) which the players must deal with one on one.

Levels of Difficulty

In the single player campaign there are three difficulty modes: easy, normal, and intense. There are two fundamental differences in the levels of difficulty, the number of enemies present within an environment and the damage enemies can deal.

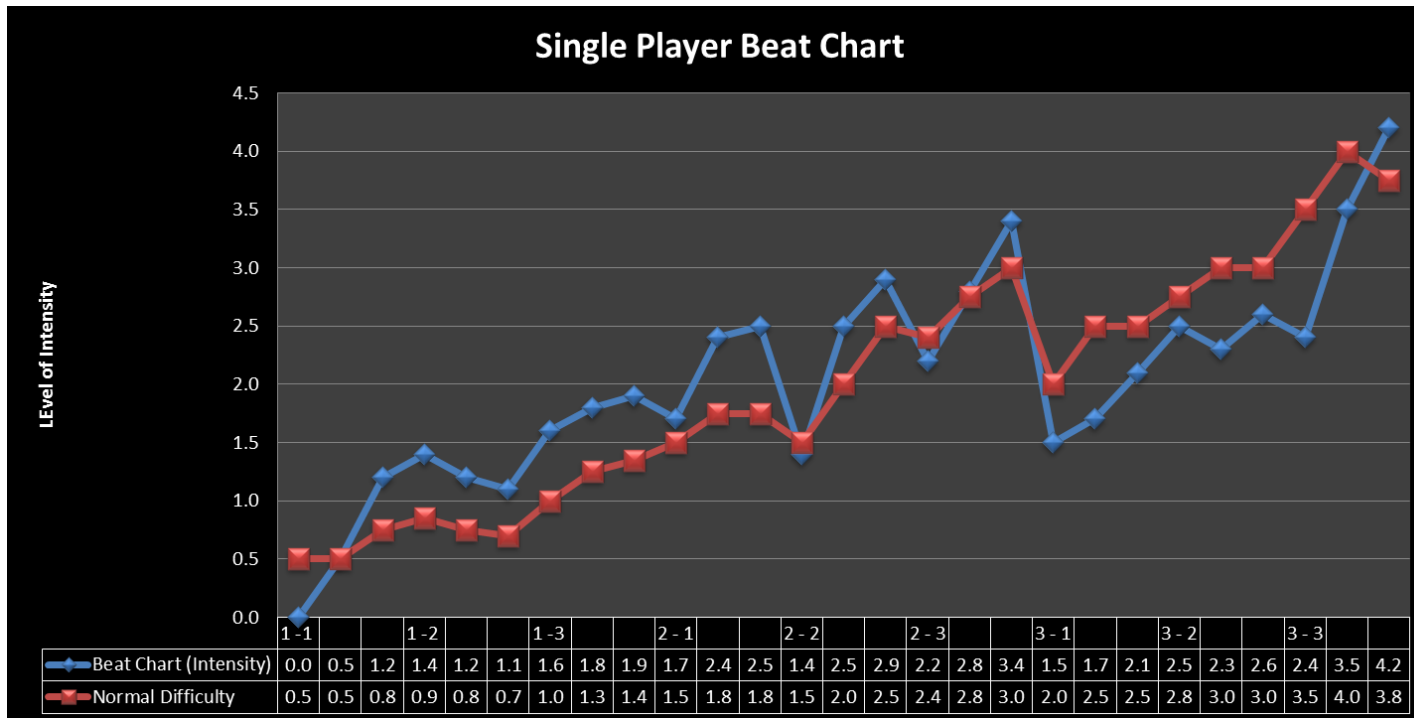
Keeping the "**Normal**" difficulty mode as the frame of reference for changes, the "**Easy**" difficulty mode has **25% less enemies** in each environment and **enemies deal 10% less damage**. On the "**Hard**" difficulty mode there are **15% more enemies** and **enemies deal 10% more damage**. These reductions/increases on enemy units and damage dealt are based upon their baseline numbers and damage dealt on "**Normal**" difficulty and all values would be rounded down. The number and composition of enemy units can be found in "**Stages and Single-Player Time Projections**" broken down stage by stage.

In stages where there are a variety of enemies present the reduction in units is performed based upon representative numbers. I.e., if the player enters a stage on "**Easy**" difficulty in which there are 100 enemy units on "**Normal**" Difficulty, 10 of which are heavy enemy unit types and the remaining 90 are basic infantry, then on "**Easy**" difficulty there would be a total of 75 enemy units, 7 heavy enemy units and 68 basic enemy infantry.

Changing the difficulty between Easy, Normal, and Hard will not affect the number of High Value Targets within an environment and will also not affect the number of mini-boss/bosses within a level. The change in the damage dealt does still apply however to mini-boss and bosses however.

Single-Player Beat Chart

The projected beat chart below shows the story and scripted action events of the game in three sections based on the three major regions the player will play through in the single player campaign (Southern Region, Chechen Capital of Grozny, Mountainous North Caucasus Region).



Set Up, Game flow, Victory Conditions

Objectives and Challenges

Objectives are conveyed to the player at the beginning of every stage. As a black ops operative the player's sole objective is to eliminate his/her target.

The challenges posed to the player are present in how they decide take out their targets. If a player decides to heavily use stealth their major challenge will be navigating around enemies in the environment without getting detected, as such all enemies in the level, excluding the HVTs, as obstacles for the player to overcome. Conversely if a player decides to take on their targets using a more action based approach their primary challenge will be how to most effectively take out any enemies in opposition. The enemies are strongest when in numbers so the player must consider how to dwindle their numbers down or separate/divide enemy groups.

Game Flow/Checkpoints

Throughout each stage there will be checkpoints the player will restart at should they fail in completing an objective or electively decide to restart. These checkpoints save the players progress and position in a level when they are triggered. While the location of checkpoints will differ from stage to stage they are rough triggered after each HVT target elimination as well as when there are no enemies within a 50 metre radius of the player akin to the checkpoint system in Call of Duty.

Victory Conditions

The goal of Phobia is to eliminate all of the high value targets in each hot zone. Victory is based upon the successful elimination of each target and exfiltration of the player from the area without being killed.

Game World – Chechnya

Overview

This section contains a description of Chechnya the game world which Phobia takes place in. The game takes place during the second Chechen war, stretching from 1999 up until late 2009. The following topics provide a detailed description the key components of the world including scale, time of day, travel, weather.

Stages

As discussed earlier in the document the game moves through three primary regions; the area outside of the Capital City of Grozny, the Capital itself, as well as the North Caucasus region. These three regions range from mountainous areas, to urban war-torn cities, to small villages. Below are actually pictures of the Chechen landscape which would be the basis for level and artistic design of the environments.

The first three stages take place outside of the capital city of Grozny, to the southern mountainous region.



In the first three stages levels would be set in small mountain towns. Being the basis for the introduction of most of the games fundamental mechanics most stages would be small in size focused on teaching the primary mechanic of stealth and combat to the player.

Upon entering the Capital City of Grozny (the beginning of the 2nd region in the game) the environments will shift to urban warzones changing both how the player navigates through the

environment as well as how they approach combat. With the introduction of much taller and numerous buildings vertical movement becomes a new method of traversing the environment in addition to providing the player with a new angle of attack.



In the final three stages of the game the game environment will shift to the Northern Caucasus, a heavily forested area. It is here that the player will use both stealth and vertical movement to track and hunt his opponents.



Scale

The Republic of Chechnya is located in the eastern part of the North Caucasus in Eastern Europe bordering Dagestan, Ingushetia, North Ossetia, and Stavropol Krai. The approximate size of Chechnya is 15,300 kilometres squared. This is in comparison to the main character "Spook" who measures 0.85 metres in width and 1.90 metres in height. The player can also move at a baseline speed of 3 metres/ second.



It is important to note that the entire geographic region of Chechnya will not be accessible to the player. This is merely to provide a frame of scale.

Weather

Weather patterns in the Chechen region will differ based upon historical data and geographic location. Depending upon which region of Chechnya the player is in, the weather patterns will reflect the actual historical weather patterns during that time in the war. Weather has no implications upon gameplay it merely is simulated to convey theme and realism.

Time of Day

The game will exclusively take place at night. While the single player campaign takes place over the simulated time of months all levels are set at night, as to provide cover for the player.

Travel

All travel within performed by the player in the game environment is on-foot. There is no accessible vehicles in-game. The player has the ability to sneak, walk, and perform parkour to traverse the game environment and obstacles.

Heads up Display

In-game HUD

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Appendix D – HUD

Overview

The following section details the layout and element of the in-game heads up display.

NOTE:

The style, shape, and layout of the elements presented here, is merely a guide. The actual element design will be determined as they are created, and by the art style as well.

Single Player HUD

While in-game the player will have access to a simple yet intuitive heads up display which will convey all the necessary game elements. The basic HUD is pictured below:

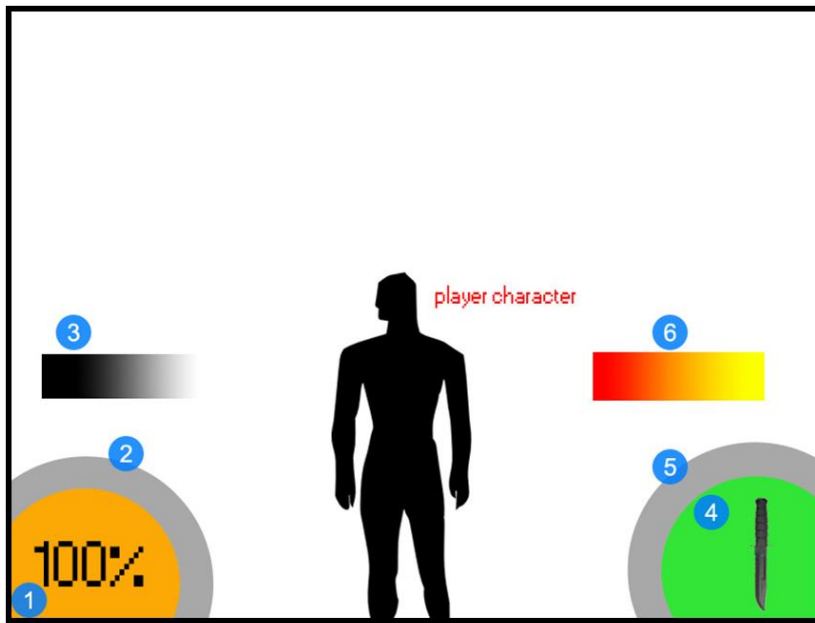


Figure 6: Single-Player HUD Wireframe

Table 2: Single-Player HUD Components

| Item | Name | Details |
|------|--------------------------|---|
| 1 | Health | <ul style="list-style-type: none"> The player's health is displayed in the bottom left hand corner of the screen with the player's current health being represented as a percentage of their total potential health. |
| 2 | Concealment | <ul style="list-style-type: none"> The circle around the health display represents the player's level of concealment. Based upon the darkness or luminosity of the area around the player the circle will change colour. |
| 3 | Level of Concealment | <ul style="list-style-type: none"> As indicated before this is not actually an element of the HUD. This gradient colour range from black to white represents the range of colour that HUD element #2 can be. Black representing that the player is perfectly concealed and white representing that the player is entirely illuminated and not concealed. |
| 4 | Equipped Weapon and Grip | <ul style="list-style-type: none"> This circle to the bottom right conveys to the player which weapon is currently equipped and if applicable what grip the weapon is in. In this case the player currently has a knife equipped in reverse saber grip. |
| 5 | Alert Status | <ul style="list-style-type: none"> The circle around the weapon display represents the current level of enemy alertness in the environment. Based on whether the player has been detected or not the colour/opacity of the circle will change to reflect the current state of alert. |
| 6 | Level of Alert | <ul style="list-style-type: none"> As indicated before this is not an element of the HUD. This gradient range from red to white represents the potential range of alertness that enemies are in. Red, representing full alert, actively engaging or pursuing the player, to White/Transparent, indicating the player is actively undetected and not being sought out by enemy units. |