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1BGDA

METAL GEAR SOLID THE TWIN SNAKES

GAMEPLAY DESIGN CHALLENGE
3C / SIGNS FEEDBACKS / GAME FEEL / METRICS



GAME PRESENTATION

METAL GEAR SOLID: THE TWIN SNAKES



ACTION / INFILTRATION GAME

RELEASED IN MARCH 2004 ON GAMECUBE

**DEVELOPPED BY SILICON KNIGHT AND KONAMI CE
JAPAN / PUBLISHED BY KONAMI**











KONAMI

PLAYER MECHANIC

THE CODEC

This mechanic pauses the game and allow to select different frequencies to call. The codec is a communication device that allow the player to reach out the supporting team in order to save or gather intel.

CONTROLS

-  **START** +  **A** Open/Close the CODEC
-  **A** Confirm choice/Next
-  **B** Back/Skip dialog
-  **or**  **+** Select frequency
-  **or**  **+** Select registered frequency

METHODS

Wait for the input, then freeze the game and open the CODEC window

Detect input and execute the selected option's function (call, save, skip dialog lines)

Detect input and go back to previous window or option / Skip the dialog in a call

Detect input then change the frequency by 0.01 Hz / Increase the frequency changing speed if the input is long

Detect input and move the cursor between the different memorized frequencies

RETURNS

Boolean : what dialog the player has seen

Integer : how many times the player has called this character

FEEDBACKS

Visual : the selected option/frequency is highlighted

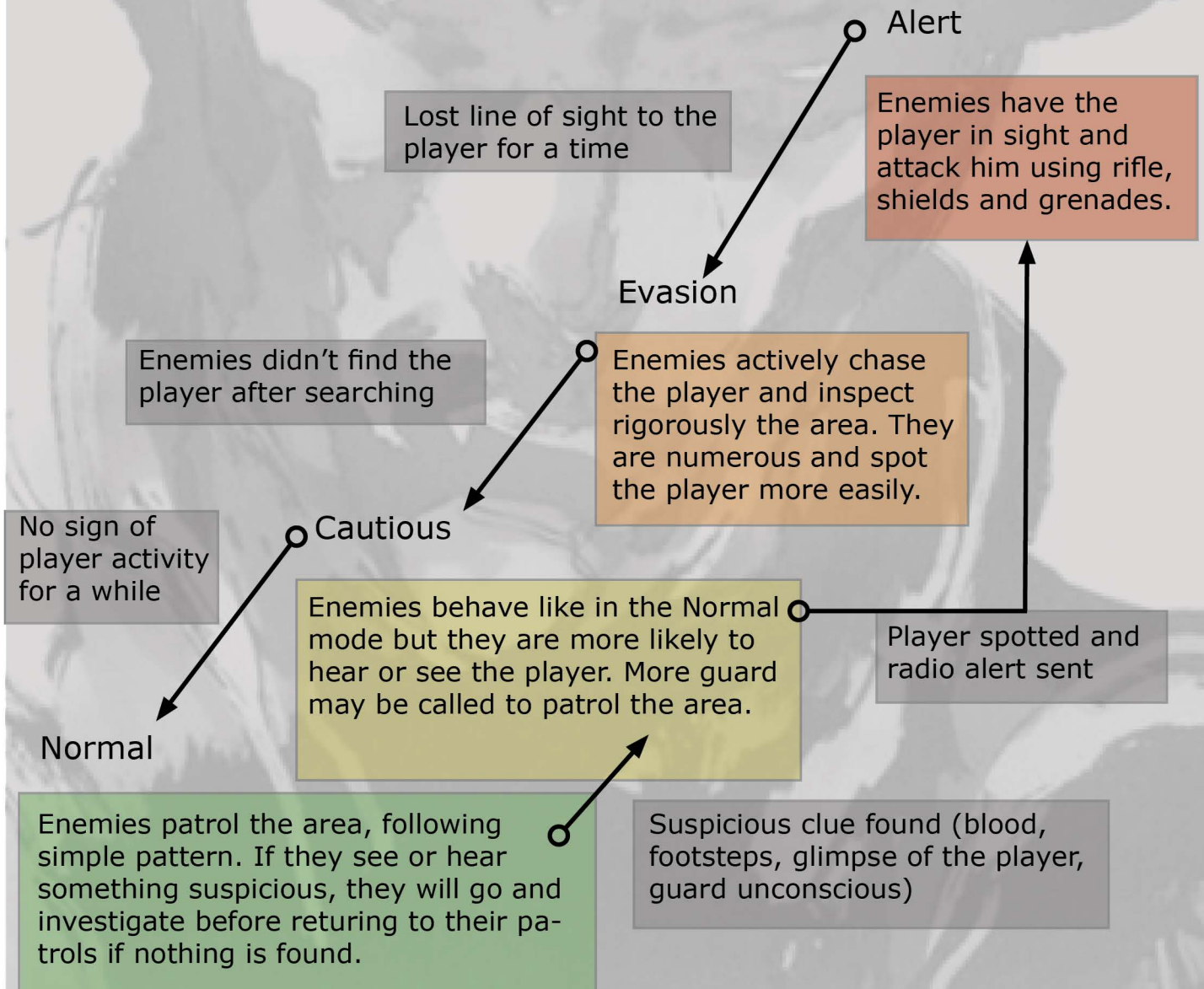
Sound : a sound is played when opening and closing the CODEC, when calling, when being called and when navigating through the option and frequencies

SYSTEM MECHANIC

THE ALERT STATE SYSTEM

The guards obey to four different states, going from patrolling to attacking. When the player is spotted or/and fighting, the guards escalate from passive to active. To go back to the first calm state the player need not to be spotted for a certain amount of time.

STATES



SYSTEM MECHANIC

THE ALERT STATE SYSTEM

INPUTS

Normal Time spent in Cautious mode without clue seen or heard

Cautious Objects in the visibility cone of the guard (blood, corpses, player, ...)
Sounds in the hearing zone of the guard (footsteps)
Time spent in alert mode without seeing the player



Here, the guard notices the box the player is in and move to check it

Evasion Areas checked and areas to check and clear
Last known position of the player
Reinforcement state (non-called, called, arrived)
Time spent in alert mode without seeing the player



The guards check meticulously each room after losing track of the player

Alert Position of the player
Time spent in alert mode without seeing the player



The alert gauge is at its maximum. The player has to hide until it reaches zero and switches to evasion

SYSTEM MECHANIC

THE ALERT STATE SYSTEM

METHODS

- Normal** Set patterns and make the guard follow it
Allow the guard to detect tagged objects and sounds
- Cautious** When detecting something odd, interrupt the patrol and move to the position. If nothing more is seen, return to patrol.
- Evasion** Go to the last known position of the player
Go to each room by pair and check them
If the player is not detected at the end of the timer, go to cautious mode
- Alert** Track the position of the player
Shoot when possible
Throw grenade when the player is behind cover
Punch the player if close
If the player escape from line of sight, go to evasion mode

FEEDBACKS

Guards have "?" above their head when they spot something and go "huh ?"

Guards have "!" above their head when they spot the player and an iconic sound is played

The radar changes form and color when in different states. It also display the time gauge between states

The music changes when the player is spotted



INFLUENCE

In the Evasion and Alert states, the player's radar is disabled, making the player unable to have an overview of the situation and forcing him to retreat rather than fight.

The CODEC, however, still works.

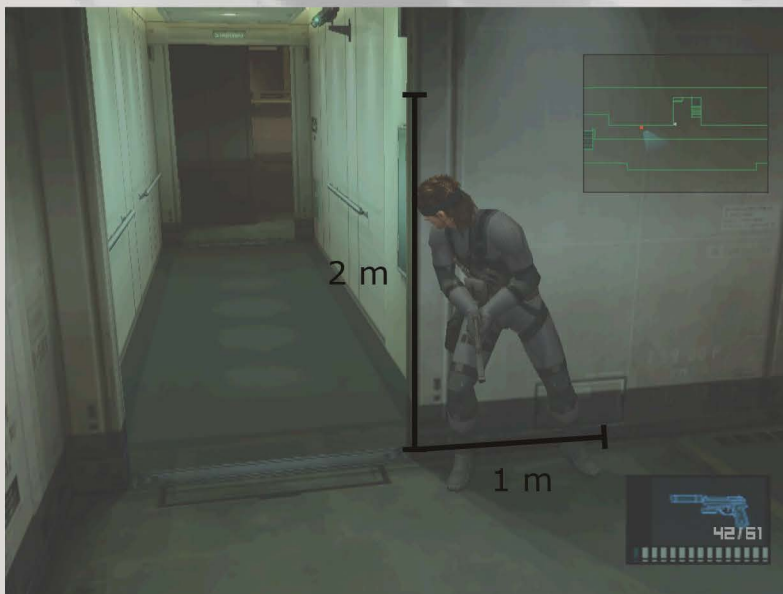


METRICS

SYSTEM METRICS

Spatial metric

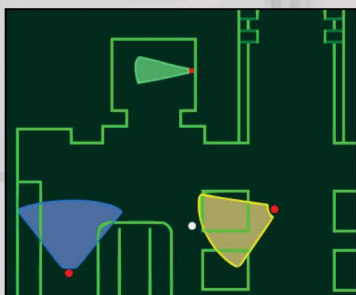
The spatial unit is the meter and speaks for itself.



Characters and Detection

Every enemy soldiers share more or less the same characteristics as the player, Solid Snake. This will be developed later on.

But they also have unique traits such as the detection cone, which has a specific length and width, their hearing zone around them, also with a specific radius, and their reaction time during any change of state.



Enemies and Cameras have different cone of vision. The radar helps the player visualize the risky areas.

Temporal metric

In-Game time is constrained to the plot and, thus, go on with the storyline.

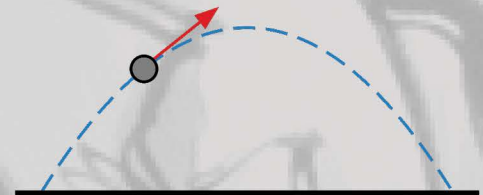
Real time (s) is used when timers are present (bomb timer, alert state, ...)



Gravity

The game make little use of gravity. It is simply used to make characters fall and give a simple trajectory to grenades.

The gravity value used is probably $9.81 \text{ m}^2/\text{s}$, same as the Earth. The little to no use of gravity make this simple value enough



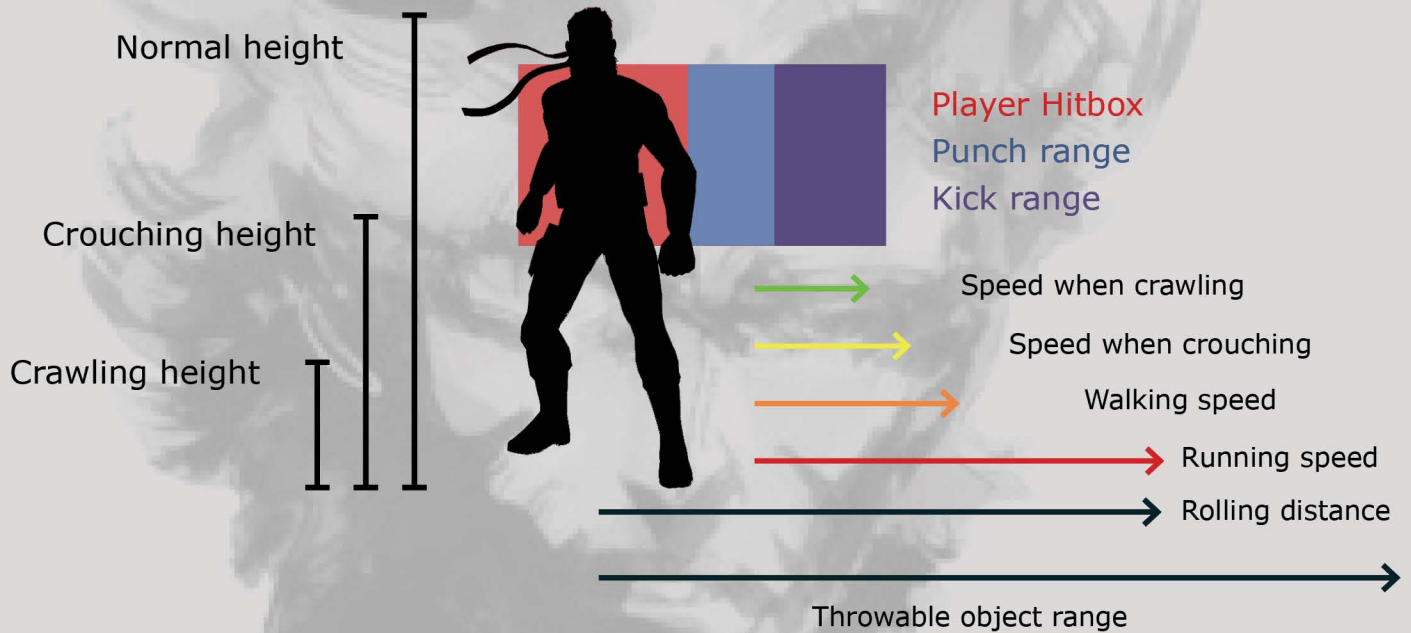
Grenades follow a simple parabolic trajectory.

METRICS

PLAYER METRICS

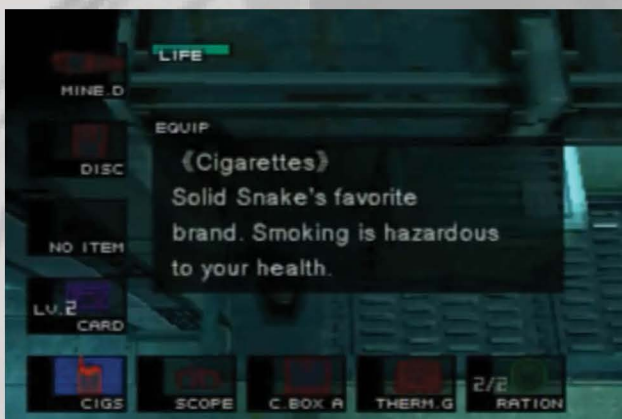


The player has a life gauge and a grip gauge that decreases when hanging on something.



All hitscan weapons have theoretical unlimited range.

The player has 2 different inventory, one for weapons and one for any other objects.



His ammo carrying capacity is however limited :

- 60 handgun ammos
- 20 rockets
- 3 to 8 grenades (depending on the type)
- 250 assault rifle ammos
- 60 sniper rifle ammos



CHARACTER

In Metal Gear Solid : The Twin Snakes, the player embodies **Solid Snake**, a legendary soldier and spy whose reputation was born from his previous success in *Outer Heaven* and *Zanzibar Land*. After these missions, Snake decided to quit his units, **FOXHOUND**, and to retire in Alaska. A short-lived retirement, since the FOX-HOUND unit brought him back to stop a terrorist attack in **Shadow Moses**, a secret military complex hosting many nukes and the **Metal Gear**, a powerful war-machine Snake faced twice before.

Solid Snake carries well the **player-agency** and does more or less everything expected from a **soldier** of his caliber. However, the **agility** he displays during **cutscenes contrasts** with the real **gameplay**, creating **frustration**.

Fiction

As written above, Solid Snake (also named David) is an **expert spy and soldier**, brought in Shadow Moses to **carry on a mission**. He would rather have stayed in Alaska but he **doesn't have a choice**. Many years of service made him **cynical**, but he remains **professional** and surprisingly **human**. His past is brought up many times during the game.

Aesthetics

Even without being in service for several years, Solid Snake remains trained and **muscular**. He wears a **tactical suit** designed to carry gear and to protect him from the arctic cold. He has an **unkempt face** with long hair and a two-days beard but make for it by wearing his iconic **bandana**.

His character design was first based on Hollywood Stars such as Mel Gibson or Lee Van Cleef, mixed with a Vietnam War veteran look.

He moves with **swiftness** and **assurance**.

His iconic **low voice** was given to by the voice actor **David Hayter**.





MECHANICS

The most basic set of mechanics is **movement** and **self defence**.

The player can **walk** and **run** in any direction. He can **crouch** and **crawl**, press himself against walls, **interact** with elevator, open and close closets, climb low obstacles, hang over handrails and **roll**.

The player can throw a **combo** of two punches and a kick. Moreover, he can **knock down** enemies, **strangle** them, drag and **hide bodies**.

When using a **weapon**, the player can **shoot in any position** all around him while **aiming**. Many level elements can **react when shot** (laser, fire extinguisher, ...). When a guard is threatened with a weapon from behind, he will surrender. A suppressor can be installed on some weapons. Weapons can be **lethal** or **non-lethal** (tranquilizer).

Few objects are **consumable**, such as rations that restore health. Others are **passive**, like a mine detector, thermal goggles or cigarettes. The player can even **hide in a box** to surprise enemies.

CAMERA / CHARACTER

The camera has **two mode** : third person and first person.

In **third person**, the character is **fully visible**.

In **first person**, it is **partially visible** or **invisible**.

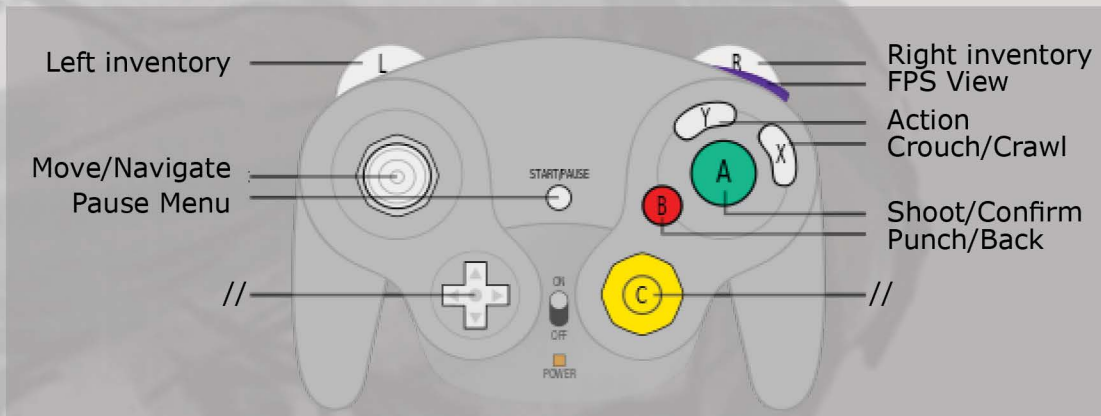
In both cases, the character is **controlled directly**.





CONTROLS

Gamecube Pad



The controls go through the Gamecube pad.

They are completely **abstract** to the mechanics they trigger (shooting isn't even on a trigger).

All of them are **fixed**, except for **Y** which is **contextual**.

Every movement is **relative to the camera** only.

About the controls

The controls respond well, but the mapping **isn't good**. It **doesn't use every features** of the pad and most of them are **counter-intuitive**, such as "Press A to shoot" or "Press X then move in a direction to crawl". It don't take in account the player's habit and expectations and it remains **a challenge** until the player get used to the mapping.

Even if the mapping is bad and doesn't make use of all the possible buttons, it is still doing a good work at dissuading frontal confrontation with the enemies. The controls don't help and that alone reinforce the "Evasion" side of the game-play.



CAMERA

The camera in Metal Gear Solid is a strange case. It is **Third Person** per **default** but the player can always go in First Person view by pressing Z. Since the game is all in **3D**, the camera is **isometric**.

The camera has a very **specific behaviour**.



The camera is always in **top-down view** on the character.

The player can go in **First Person** to **aim** properly.

It always put the **action first** by **closing in** during interactions.



CAMERA



The camera move to give the player **specific points of view** during specific actions.



The **First Person** view is activated when the character is in **narrow spaces**.



In specific areas, the camera takes a position to not only depict clearly the action but also to **reinforce the scene**.

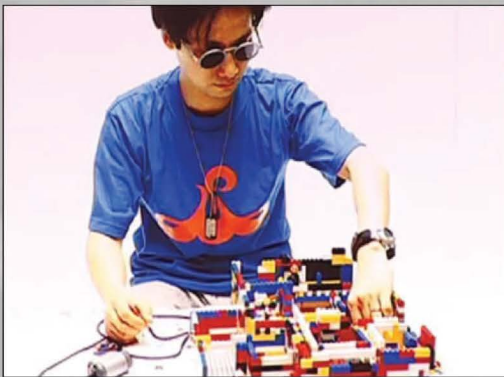
Here, Solid Snake is chased in a stairway by multiple enemies and the camera is positioned at **the center of the building**. It follows the ascension from a **central point of view** to reinforce the feeling of **urgency** and of **overwhelming** enemy number.



CAMERA

Here, the camera isn't just an object in the game but a **tool** used like a **movie camera**, to **reinforce the drama** and **focus on the action**.

Metal Gear Solid is already famous for its cutscenes but the game itself is designed to *follow movie codes and camera placement*.



Hideo Kojima is deeply linked with the Metal Gear Franchise. He embedded it with his passion for **cinema**. Lego were used in the making of the level design of Metal Gear Solid and a real camera was used to ensure the best scene angles even before the 3D modelisation.

3C CONCLUSION

Metal Gear Solid has a subtitle : Tactical Espionage Action. And that is what the 3C promises us.

On the character side, there is an action film hero, a cynical legendary soldier who still has values, a character who gives the player plenty of agency to navigate through the game (not as much as everybody would want though).

On the camera side, there is a dynamic camera ,that the player barely controls, but which always focus on the main character and the action. It is sometimes a challenge to cop with it, but most of the time the camera is great.

Finally, there are the controls which may mitigate the picture. Even if they are lacking when it come to the mapping, the controls do a good job putting the emphasis on the movement.

As the subtitle said it, the 3C makes for a spy-flavoured, tactical and action-packed game, which follow the footsteps of many action movies, with a convoluted plot and over-the-top sequences.



PSYCHO MANTYS CASE

At some point in the game, the player will face a Boss called **Psycho mantys**. This encounter make for exceptional use of the **controller** and the **camera**.

The fight seems normal



BUT

Camera

Psycho Mantis can make the **screen go black** for a moment, leaving the player confused.



If the player aims toward him, the **camera** may **switch** to his own point of view, confusing the player once more.



Controller

Psycho Mantis can read the mind of Solid Snake. The player need to **unplug** his **controller** and to **plug** it in **another slot** for the bullet to hit Psycho Mantys.

Conclusion

In this very Boss fight, the camera and controller went from the **User Interface** (camera model & interaction model) to the **Gameplay** and became **challenges**.

SIGNS / FEEDBACKS

SIGNS

Informative UI



Sometimes, the support team will call the player to inform him of his objectives and to give him tips.

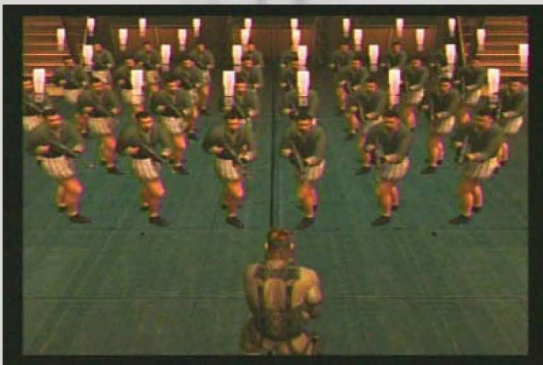
Sound also play an important role as a sign. The player can hear many footsteps including his own, doors opening and closing, and guards chatting.

SIGNS / FEEDBACKS

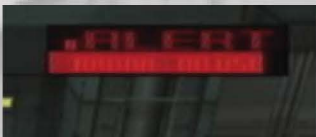
FEEDBACKS



The change of alert state is signaled by the "?" above the guard and the "huh".



The change of alert state is signaled by the "!" and a very recognisable sound.



The change of alert state is also signaled by the change in the radar system.



The gun fire or jam if there is no bullets left in the clip. Enemies will scream if hit. The same goes for the character.

In the same fashion, elevators and doors will bip negatively if they can't be opened.

If the player tries to roll in any stairs, Solid Snake will fall down pitifully.

SIGNS / FEEDBACKS

CONCLUSION

Stealth games rely **heavily** on **signs** and **feedbacks** because of their very structure.

The game is built around a **system**, composed of **enemy** patrolling a more or less complex **layout**, which may hide traps and other **challenges**. This system works on its own and is a force to be reckoned with in case of direct conflict : the player **doesn't have the advantage**.

It's up to the player to **navigate** through this system without perturbing it too much, using the many **possibilities** and **approaches** that are given to him by the **environment**.

The player always have some **tricks** to make his way toward the objective. He generally has a **mobility** advantage and some **gadgets** to use.

But his most **useful** tool is the enemy **system** itself, or rather, what the system show to the player. Patrol patterns, numbers of enemies, traps but also blind-spots and hidden paths. All of this is **visible** to the player, who is free to poke the system and observe the different **signs** and **feedbacks** emerging from it, as long as he escapes any form of punishment, that is. That's why signs and feedbacks are that important.

Signs and feedbacks coming from **enemies** and from the **environment** are most **important**.

"?" and "!" are well known in every stealth game. They allow the player to **know** when the system **changes of state** and, after a while, what **behaviour** it will adopt.

The radar displays the current **state** of the system for the player to know what dynamics he will have to slip through or when it will be safe for him to come back in.

Doors and elevators **responding** to the player **input** let him know wether or not he can access new **areas**, may they be safe or hostile.

If all else fail, there still is the **combat** mechanic, even if hardly recommendable. It still allows the player to know **when** to **shoot** and when to hide in order to **reload**.

Signs and feedbacks are **essential** to make the player feel he is **interacting** with a complex **system**. *Pushing the player not to play by the system's rule is unique to stealth game.*

GAME FEEL

Metal Gear Solid : The Twin Snakes delivers an immersive experience.

Mechanics such as the CODEC and the alert state provide a believable background, with a decent support cast and challenging system to tackle. Allowing the player to shoot more precisely while aiming in First Person, as instance, reinforces this immersion.

The main character has good abilities that are still humanly acceptable. The plot closely resemble an action movie narrative.

The camera always closely follow the player's actions, which is great to highlight interesting gameplay but it also leaves some blind spots for the player. The only thing that may break the immersion is the controls, whose clunky mapping make the player need some time to get used to it.

The challenge offered by the base the player is supposed to infiltrate is quite good. It proposes a good difficulty to tackle and frequently alternates between infiltration gameplay and memorable Boss battle to keep a certain pace.

To conclude briefly :

The mechanics, metrics and 3C of Metal Geat Solid make for an immersive experience.

The signs and feedbacks allow the player to better interact with the game system to offer a better gameplay experience.

THANK YOU FOR READING



Time to sneak out of here
!