

Game Name:

Metal Gear Solid V; The Phantom Pain



Description:

Metal Gear Solid V is a stealth-action game taking place in 1984. The player controls Punished “Venom” Snake, a disfigured soldier waking up after an eight-year coma. The player runs a private military company titled “Diamond Dogs” and deploys on missions to take down the rival company XOF. Using a variety of tools and tactics, the player evades enemy soldiers throughout Afghanistan and Africa as they attempt to dismantle their enemy. Although stealth is emphasized, the presence of heavy weaponry, vehicles, and boss fights allow the player to handle objectives in any way they choose.

Finite State Machines(FSM):

In MGSV, enemy combatants have four main behaviour states. These include calmness, curiosity, increased vigilance, and full alarm. When you arrive in enemy territory, the default state is calm. Enemies roam the battlefield on specified patrol patterns. These patrol patterns may be disrupted if the player arouses suspicion via small mistakes i.e., dropping a magazine or making another small noise. While in the curious state, the enemy will decide to move to investigate the noise, returning to calm patrol schedules when determining if nothing is there. The increased vigilance state is when the player makes a large mistake, such as shooting a weapon without a suppressor, or leaving a body out to be found. During this state, enemies may gang up to hunt for the player, and it will be a long time until they return to the calm state. If an enemy catches a player, and the player does not silence the enemy, the enemy will sound an alarm/call for backup, thus initiating full alarm state. During the full alarm state, enemies will be ready to attack the player immediately, and will sound the alarm to reach other soldiers to put them in full alarm state as well, given the player has not disabled the alarm system. Similarly, if the player has not disabled radio/communications, enemies may call for reinforcements, sending more for the player to deal with. The reason this system is used instead of making each by hand, is because the soldiers all act the same, so such code would be redundant.

Dynamic Difficulty Adjustment:

MGSV uses a DDA known as the “Revenge System” to adjust difficulty to the player. The adjustment is based on the player’s actions and what tools they commonly utilize. For example, if the player chooses a more aggressive playstyle, the enemy will start to wear helmets, body armor, and even carry ballistic shields. If the player is frequently caught at night, enemies will deploy with night vision. Although these features remain present throughout most of the game, cautious play can reduce enemy gear levels. Certain missions also disregard this system. Missions revolving around certain boss fights such as “The White Mamba” and “Sahelanthropus” do not feature adaptive difficulty due to the lack of non-boss enemies. Although it may seem counter-intuitive, harder difficulties also forego this system. Towards the end of the game, the player gains the ability to replay certain story missions with difficulty modifiers such as a mission failure upon breaking stealth or loading into a mission without equipment. This technique is useful as it adjusts game difficulty naturally as different players have different skill levels and play styles.

Sources:

Source #1:

<https://www.gamepressure.com/mgs5thephantompain/enemies-states-of-alert/z27b18>

Source #2:

[https://metalgear.fandom.com/wiki/Revenge System \(enemy preparedness\)](https://metalgear.fandom.com/wiki/Revenge_System_(enemy_preparedness))

