

Life Sentence

May 2018

Action / Adaptive / Escape / Prison / Multiple Perspectives / Stealth

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Base Concept

- Multi dimensional prison breaking game, The Escapists style (Life Sentence)

Main Mechanics

Hiding (middleground parts)

Distraction

Visual A.I feedback / Information (= Key in stealth games)

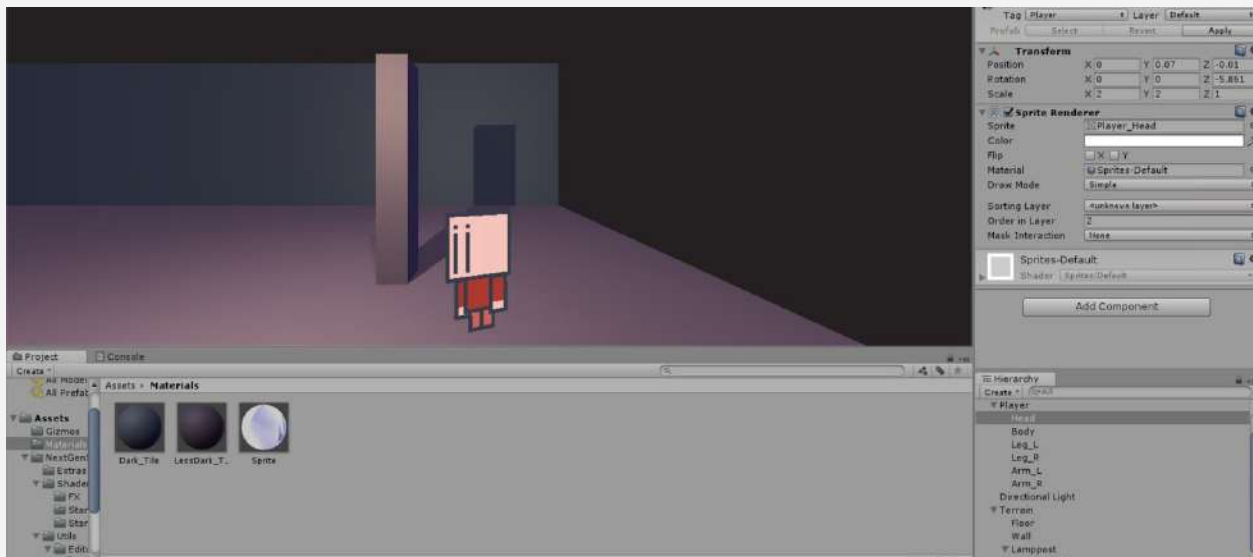
Sandbox-style freeroaming / Open choices for strategy

Multiple perspectives, and switching between them

Log

25-05-2018 (2 hours):

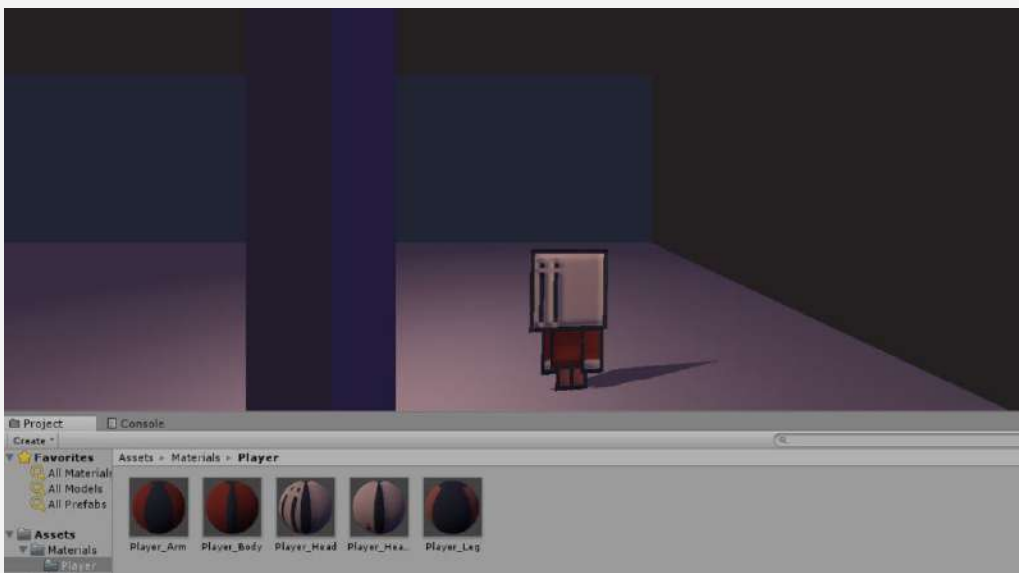
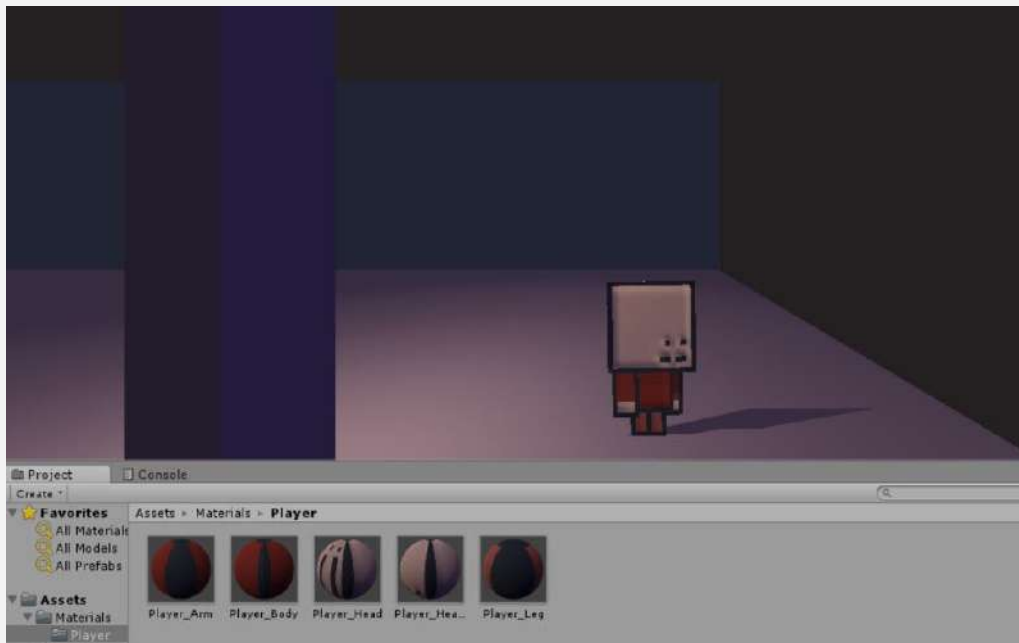
Fetches the concept from an old .txt file of mine, started building on it. Player character added, walking animations and 2.5D perspective.



26-05-2018 (6 hours):

Experimented with Normal Maps, Lighting and Shading.

Added a walking animation (Made separate sprites for body parts, and animated them in-code with $\text{Sin}(x)$ / $\text{Cos}(x)$ functions), and an idle animation (blinking, cycling through different sprites / materials on random intervals).

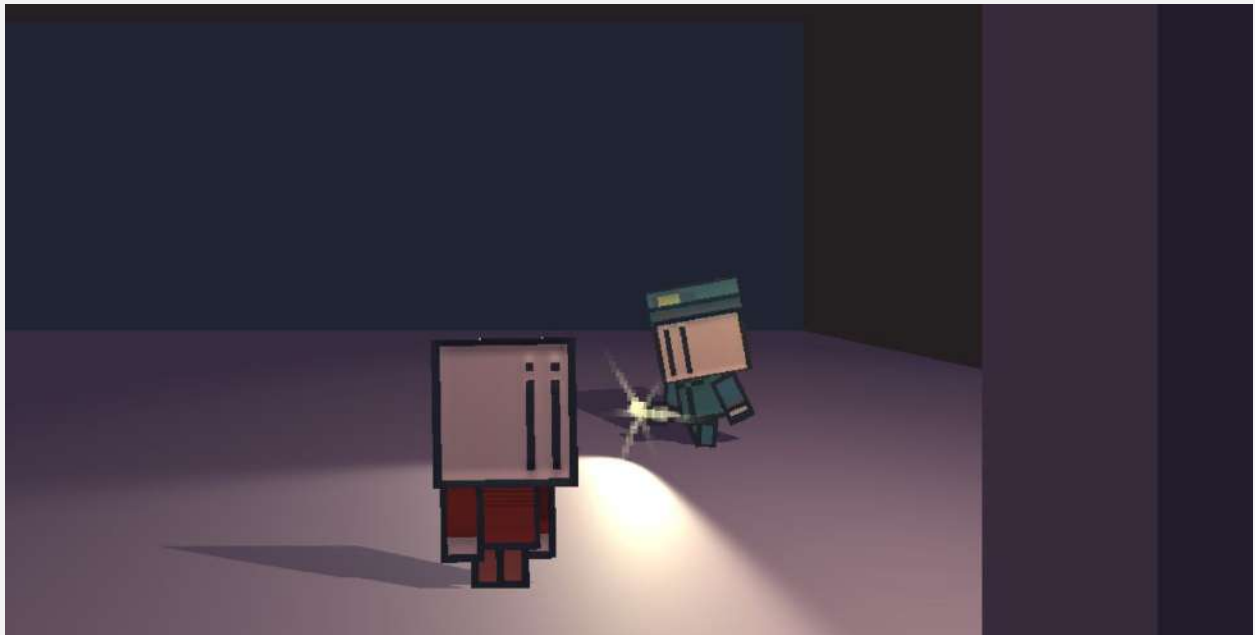


29-05-2018 (1 hours): Prison guard texture made, will be implemented tomorrow during the lesson.

30-05-2018 (2 hours): Guard entity implemented, simple movement A.I & animations.

Instead of normal map texture files, they are all generated in-code during the starting sequence.

31-05-2018 (4 hours): Guard A.I polished, he can now hold simple items in his hand (For now just a flashlight). Flashlight light source added, so he will be able to shine it around.





01-06-2018 (6 uur): *Designing a sensory system for the guard A.I.*

How should the guards react to spotting the player? Research into stealth games/mechanics.

- Are there only two senses that are important? (audio and visual)

”

3) Calculate Sensory Intensity as a Continuous Value

There are many factors that are taken into account when sensing:

- For vision, awareness depends on the lighting, size and exposure of the object, distance from other objects, etc.
- For sounds, you must consider the intensity of the sound, the fall-off based on distance and geometry.

Ultimately, though, you'll need to boil down all these factors into a single floating-point value that can be used to determine the level of awareness.

4) Use Discrete Levels of Awareness in the Logic

When it comes to game logic, it's often a best to use discrete values rather than continuous ones. For the sensory system, you should convert the awareness level into a discrete value: low, medium or high awareness.

The process of deciding on a discrete value of awareness can also include more factors:

- **Ramp-up** delays, used to simulate reaction times.
- **Cool-down** capacitors, which fake short-term memory.

Additionally, the brain has a separate level of alertness which can affect the levels of awareness.

”

- Champandard, A. (2007). *Sneaking Behind Thief's AI: 14 Tricks to Steal for Your Game* | *AiGameDev.com*. [online] Available at: <http://aigamedev.com/open/review/thief-ai/> [Accessed 1 Jun. 2018].

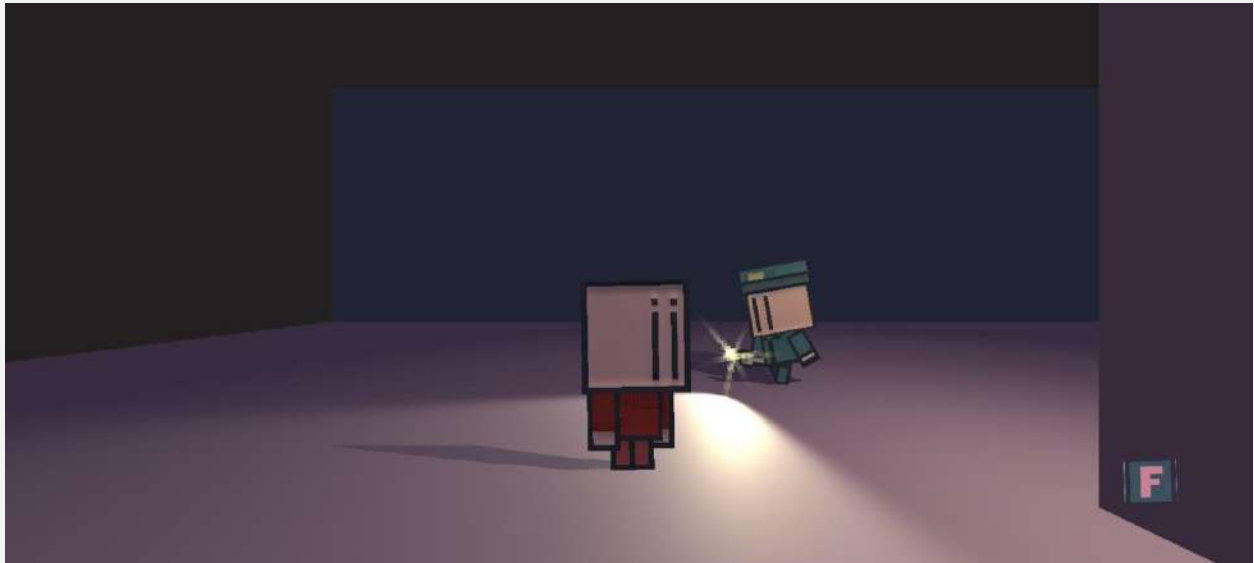
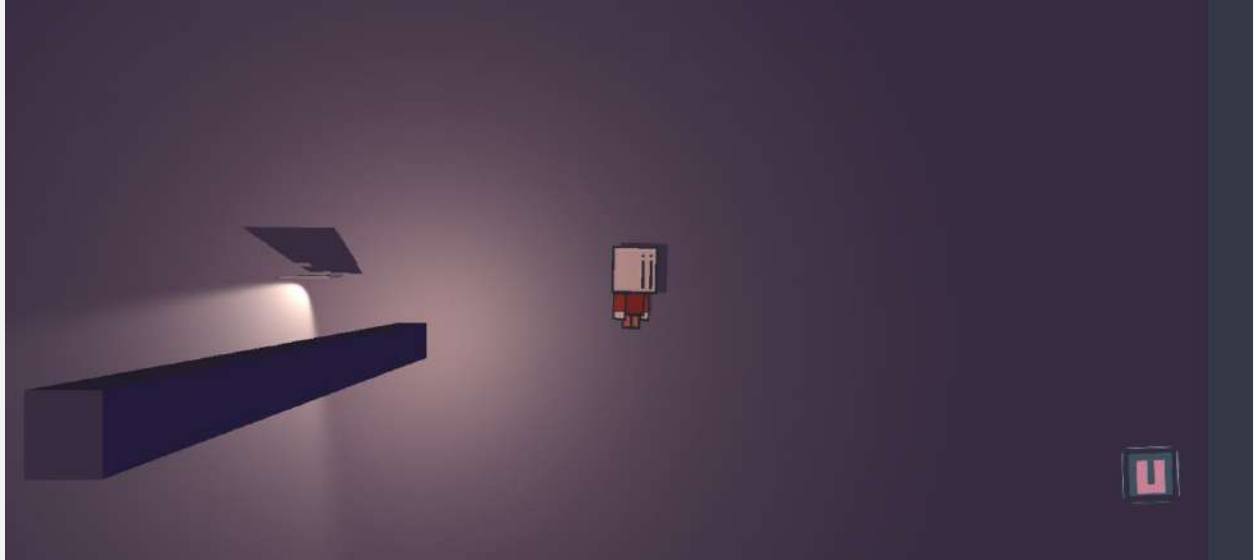
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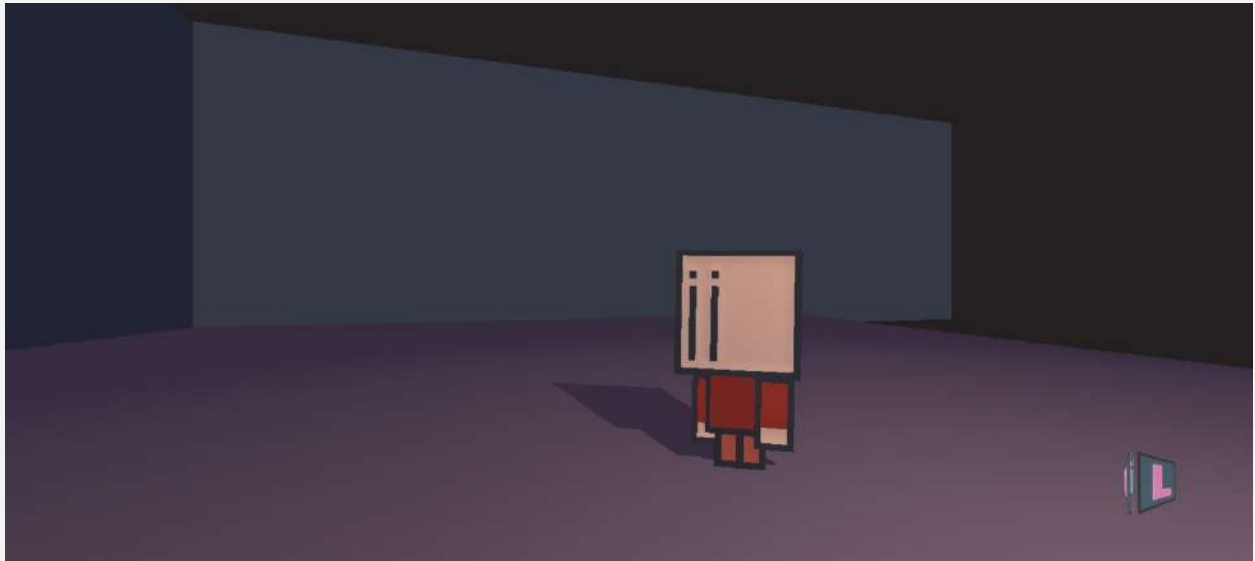
Most interesting is the snippet that restrains the AI's ability to see the player until seen by the player, which is purely for coordinating the player's entertainment.”

- (Tom Leonard, 2003)

I will be designing a State Machine, for levels of awareness of the guards.

- Besides all the above; Perspective switching system implemented

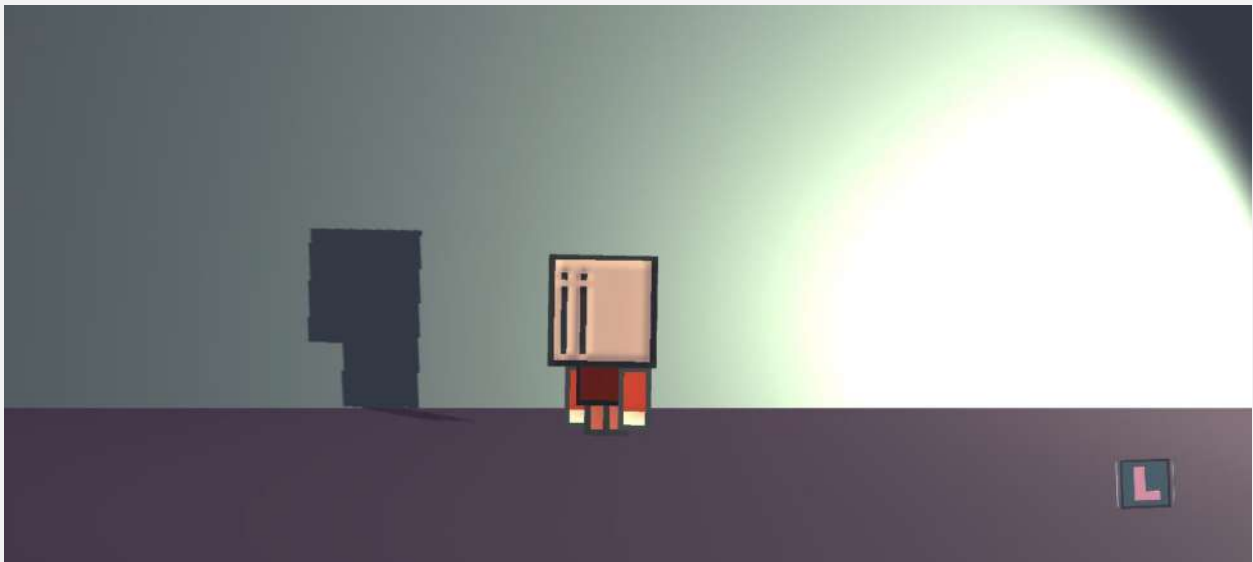


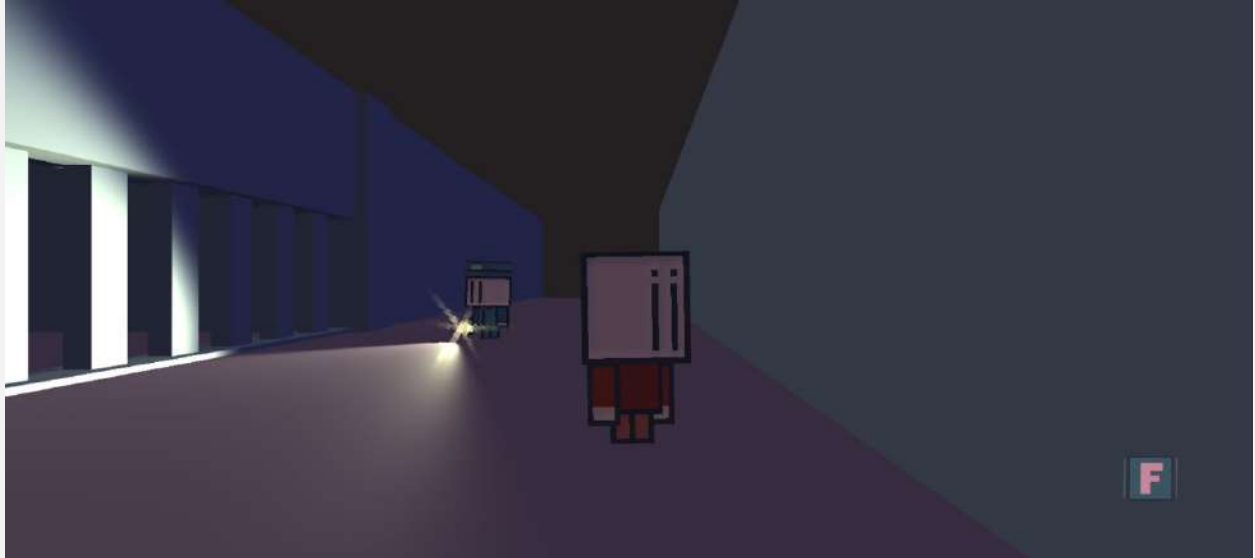


05-06-2018 (3 uur): Oriëntatie en perspectief switching designed. Je hebt vier aanzichten waar je tussen kan switchen, met de arrow keys. (**F**ront, **R**ight, **B**ack, **L**eft).

Door middel van directie vectoren heb ik de juiste X,Y- en Z-axis vermenigvuldigd met -1 en +1 factoren, waardoor de charactertextures op de juiste manier flippen, en de 2D-sidescroller controls juist worden aangepast.

07-06-2018 (2 uur): Test level gemaakt (gevangeniscel met corridor, waar een guard loopt en schijnt met zijn flashlight). Lighting aangepast en de controls een beetje getweaked.





08-06-2018 (3 uur): *Third person Camera collision met terrain geprogrammeerd d.m.v. een Rigidbody en een BoxCollider. Nu clipt de camera als het goed is zo min mogelijk door objecten heen. Daarnaast, de mogelijkheid toegevoegd om leunend te kijken wat er rechts (of links) van je is. Zo kan je bijvoorbeeld uit de tralies van je cel gluren, en kijken of er iemand aan komt.*

Dit doe je met Q en E.



24-6-2018 (2 uur): Zoom-out functie (met S) gemaakt, zodat de speler meer mogelijkheid krijgt om de surroundings te snappen, en alert te blijven. Begonnen met Guard A.I coderen. Tot nu toe zullen ze drie commands hebben: REST, PATROL en SEARCH. In een Vector3 array worden simpele patrol paths geregistreerd (die ik van tevoren programmeer per guard).

29-6-2018 (6 uur): *Visual FX / Post-processing toegevoegd, sounds, triggers, 3D tekst, interactable celdeur en main menu scherm. Door tijdsdruk heb ik zoveel mogelijk proberen af te maken van dit. En dus heb ik geprobeerd mijn te ambitieuze idee zo simpel mogelijk tot een werkende game te verwerken.*

Inspirations

- Paper Mario (Art Style)
- Thief
- Assassins Creed
- Splinter Cell
- The Escapists
- A Way Out
- Metal Gear Solid
- Gunpoint

Research

Stealth

<http://aigamedev.com/open/review/thief-ai/>

https://www.gamasutra.com/view/feature/131297/building_an_ai_sensory_system_.php

<https://www.rockpapershotgun.com/2018/04/03/what-works-and-why-unfair-intel-in-stealth-games/>