



Reinventing NPC Awareness for Assassin's Creed Origins

Different types of awareness

- Internal State Awareness
- Environment Awareness
- Awareness to other Actors



Internal State Awareness

Awareness States

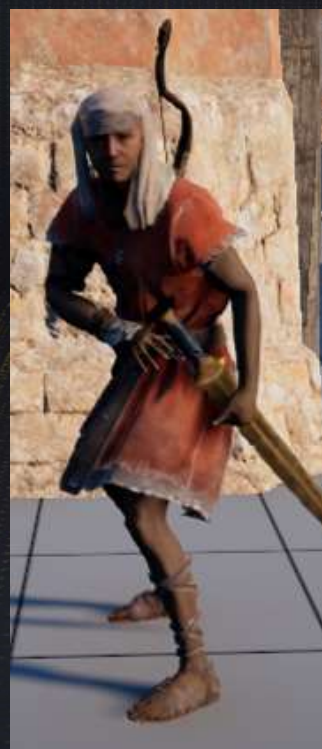


Awareness States

Normal

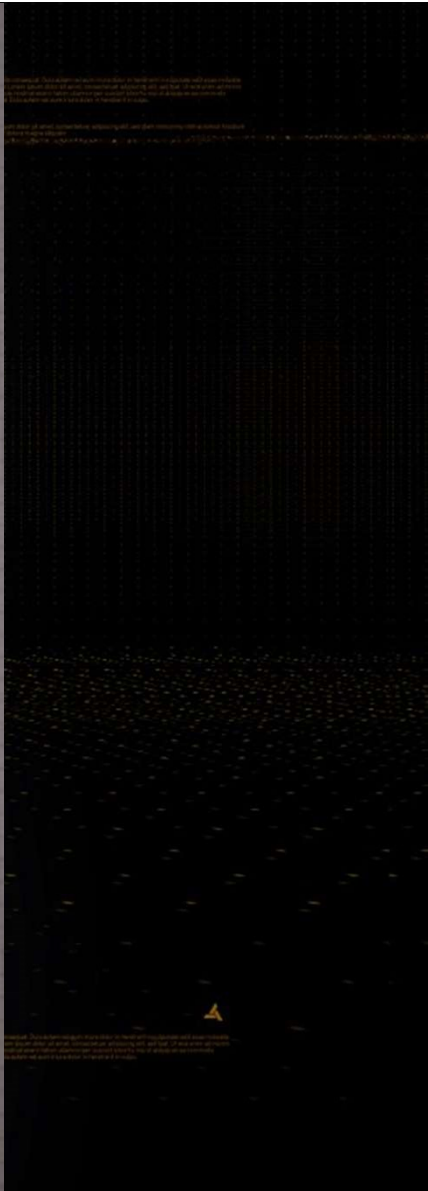
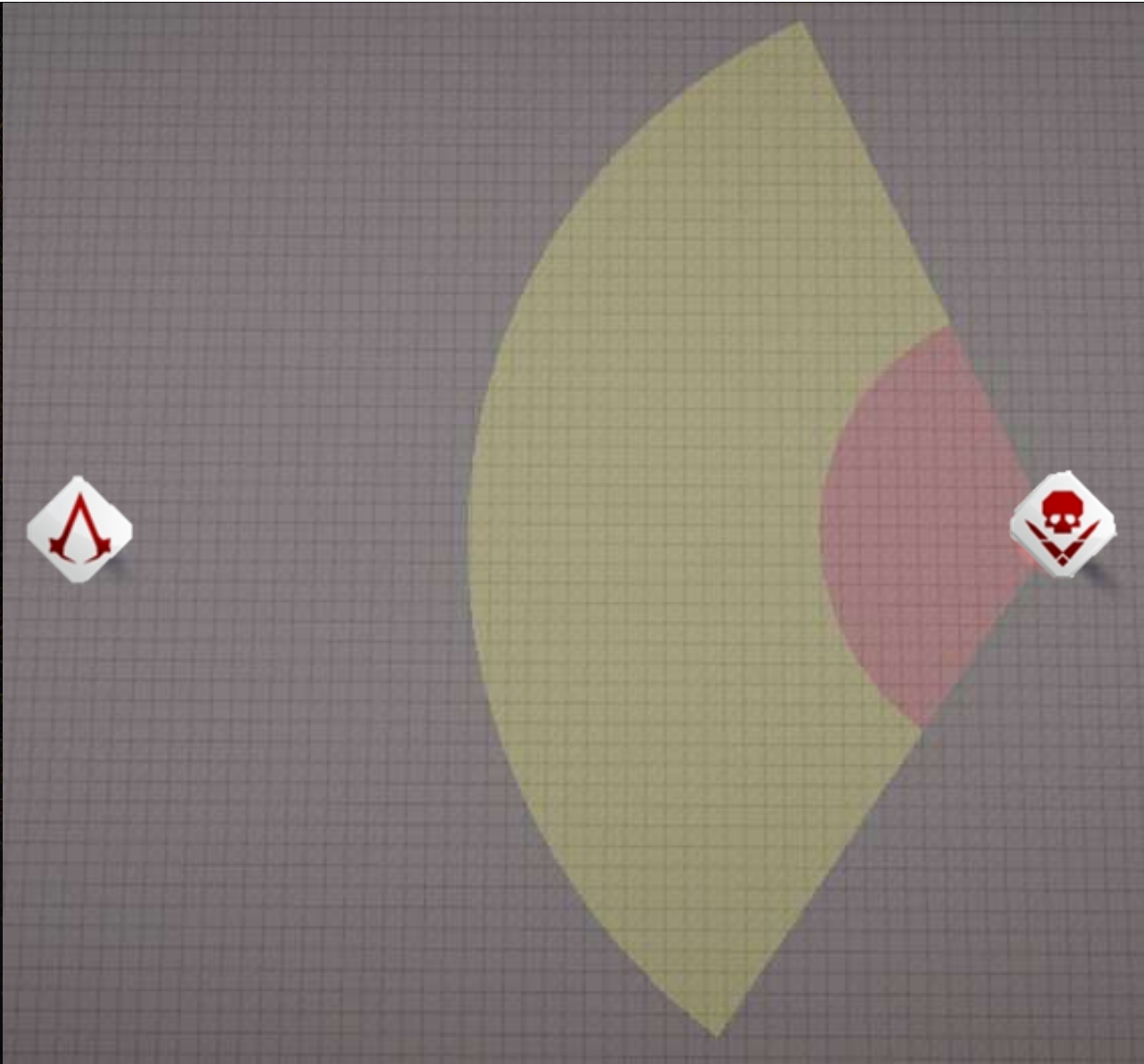
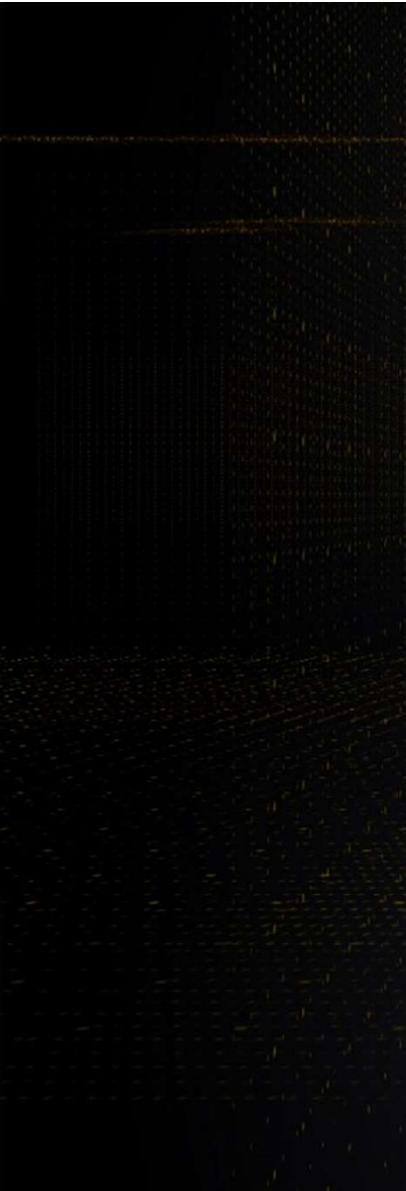


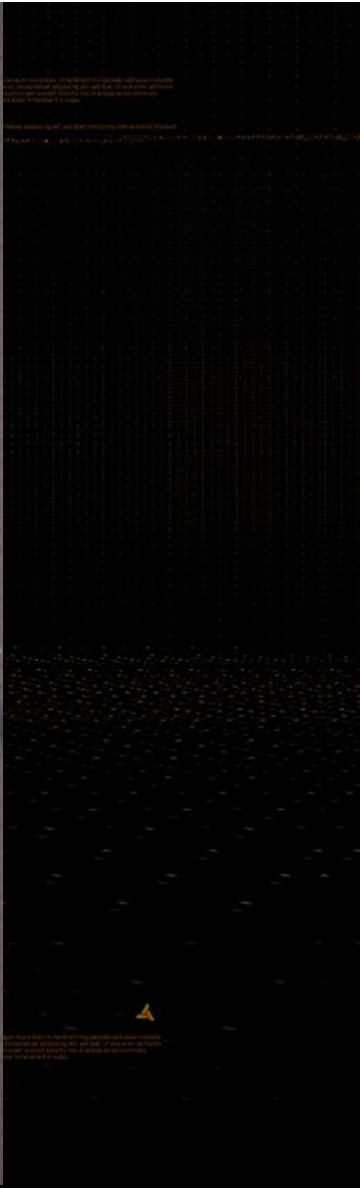
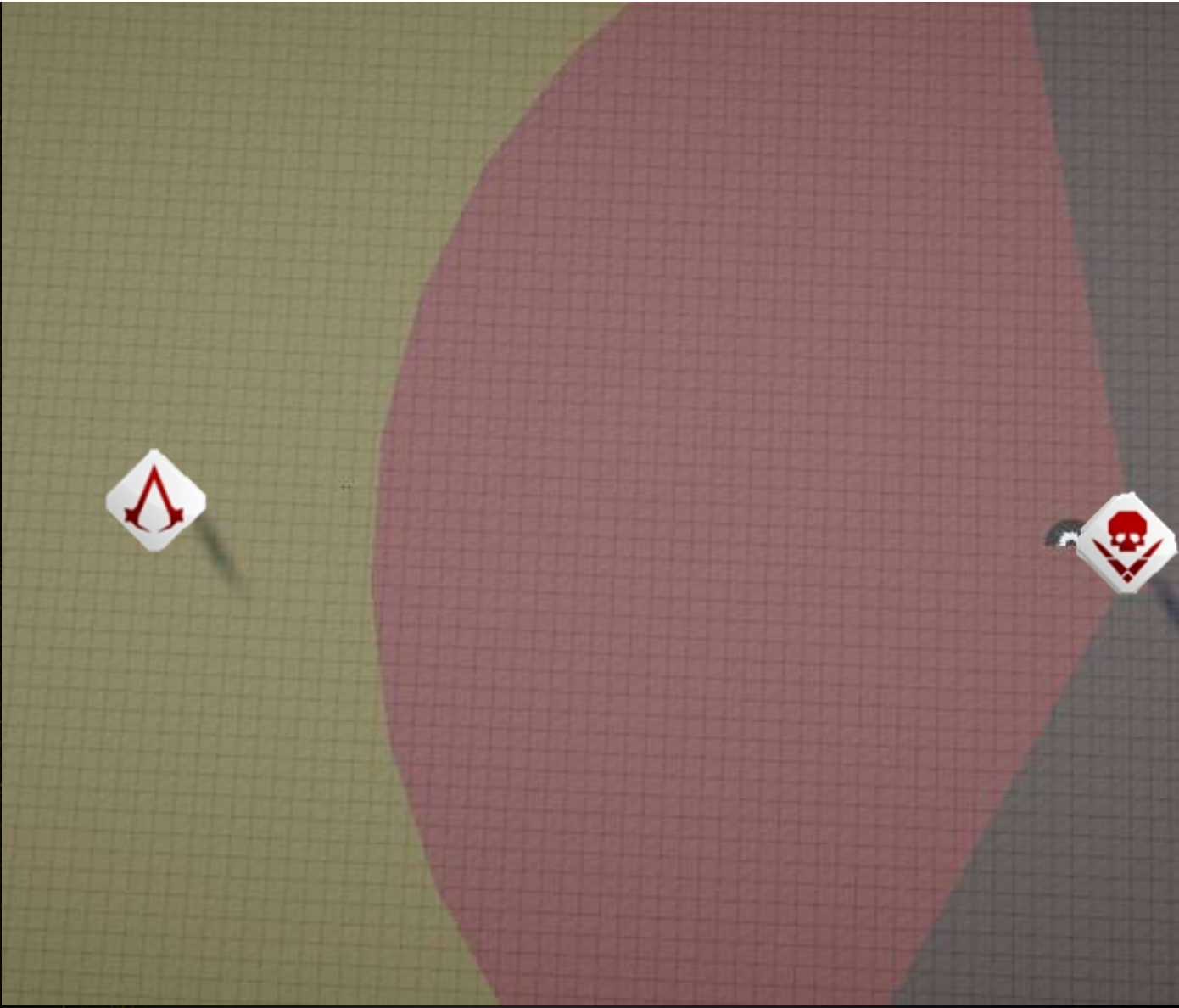
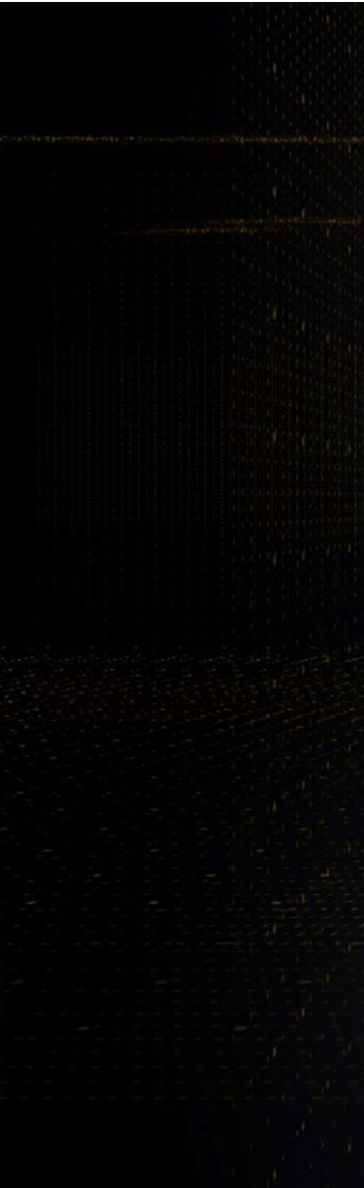
Suspicious



Alerted

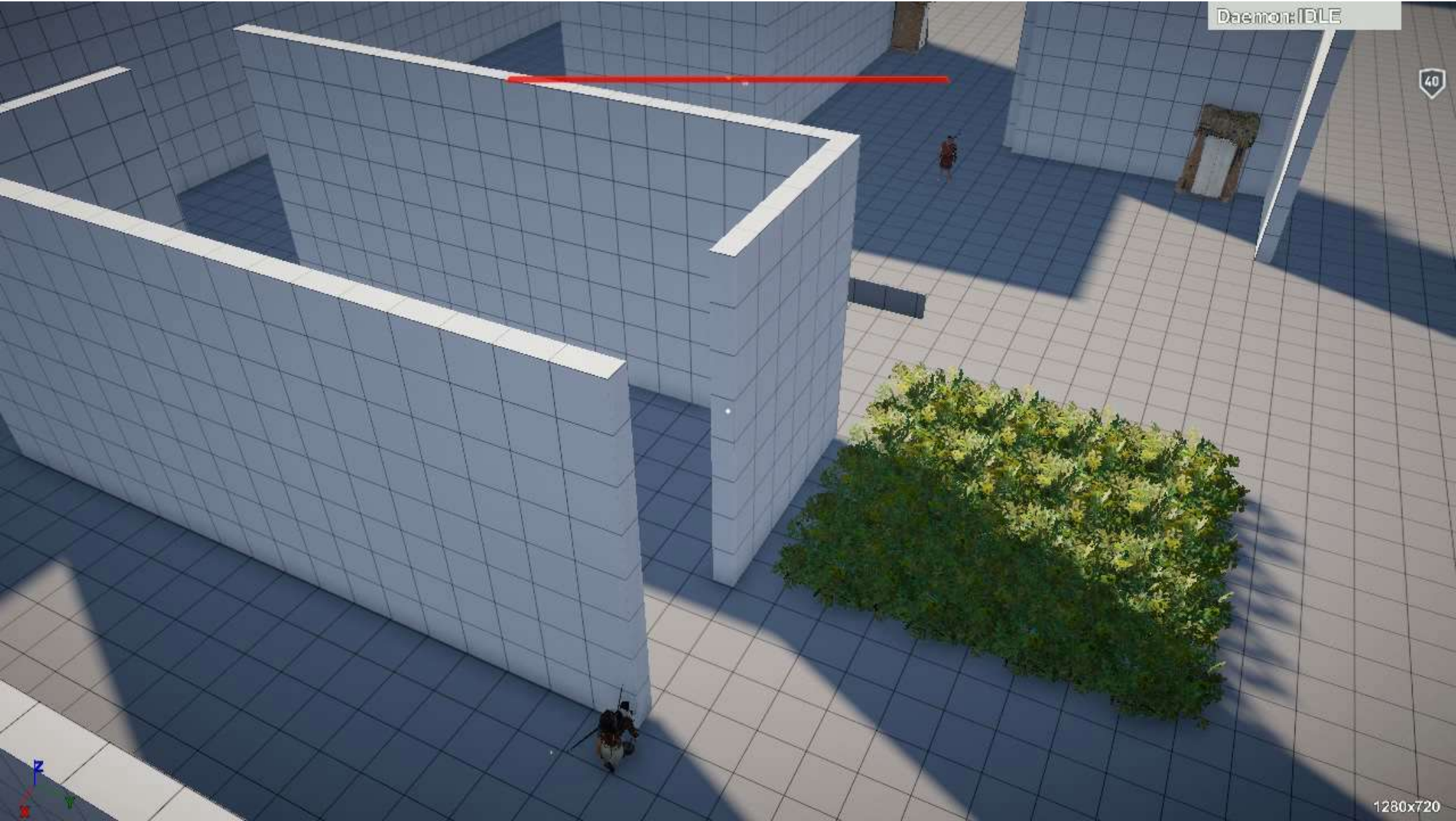






Daemon: IDLE

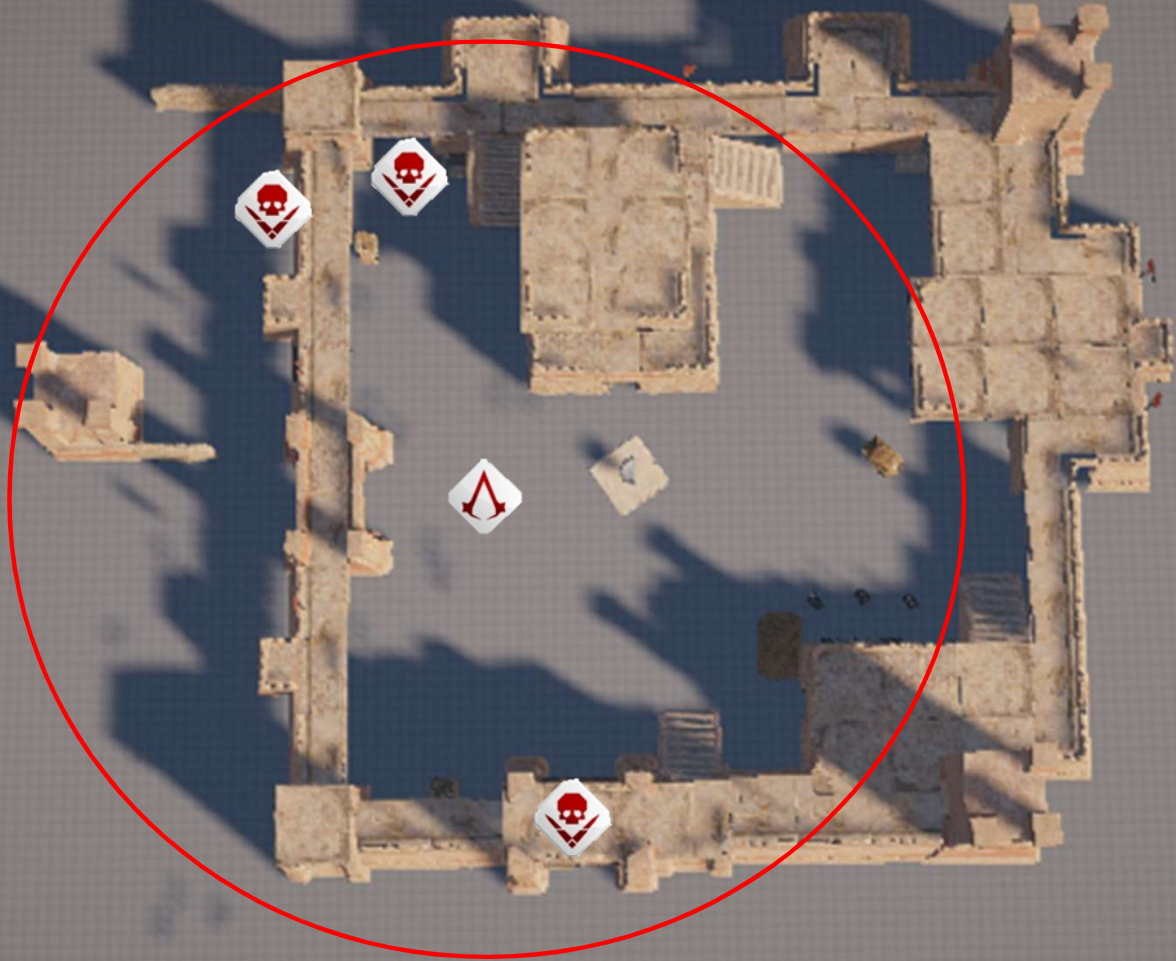
40



1280x720



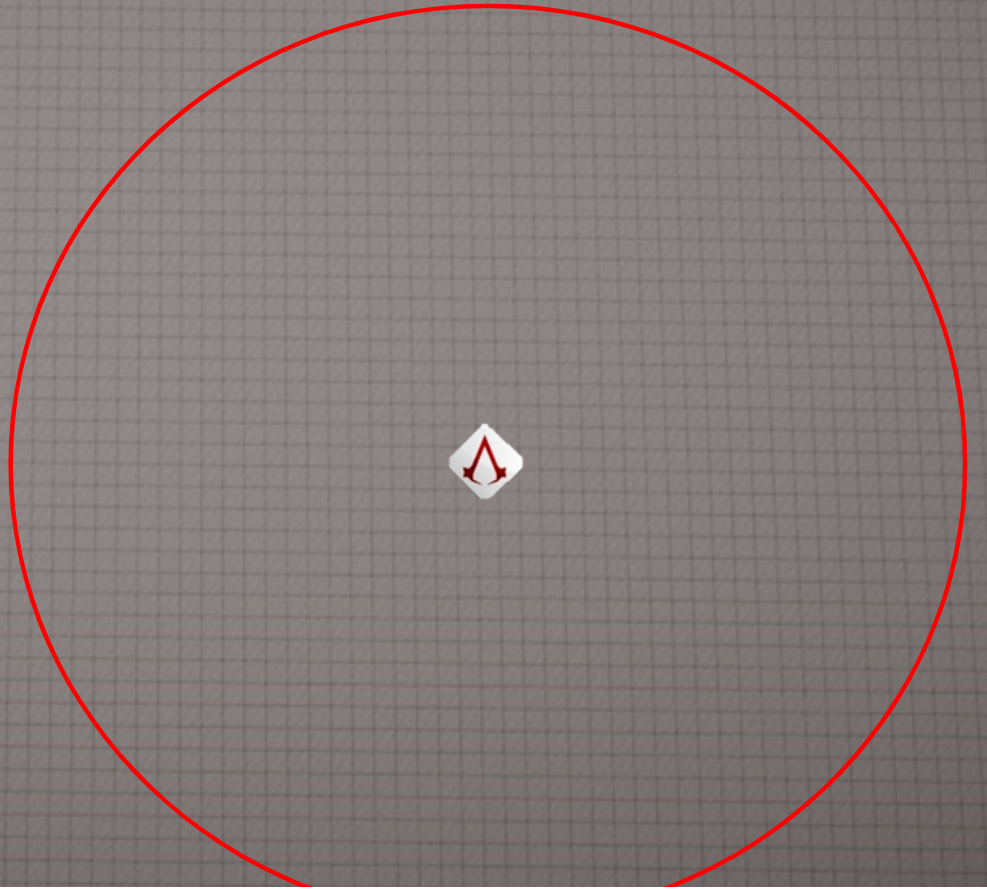
MetaAI







!



AIDebug ENG 36.9
30 GPU 32.5
1.0x RES 1200p
billion00

CHEAT ACTIVATED

?
255 m

20

40

604 m



47 msg
12,394 wrn
2,229

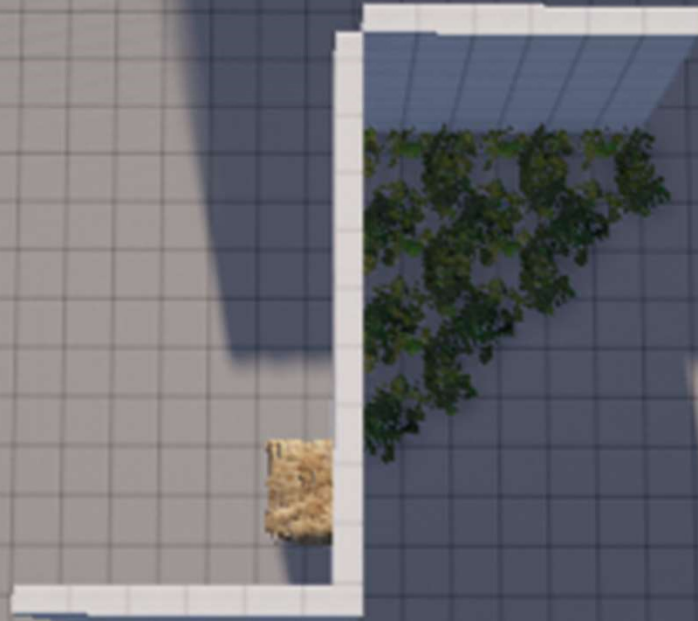
PC DX11 High Quality (1920x1200, 1.00) c2493919_d1592170_s88679 built on Thu Sep 28 10:31:28 2017
/skipmips:0 /memdebug | world: ACE_Egypt (slim) | pos: 1354.3, -896.8, 203.5 | cam: 1355, -900, 205 | speed: 0.0 m/s | time: 14:07 | grid: -Y298 | territory: GIZA_5 | location: Unknown | water: ABOVE

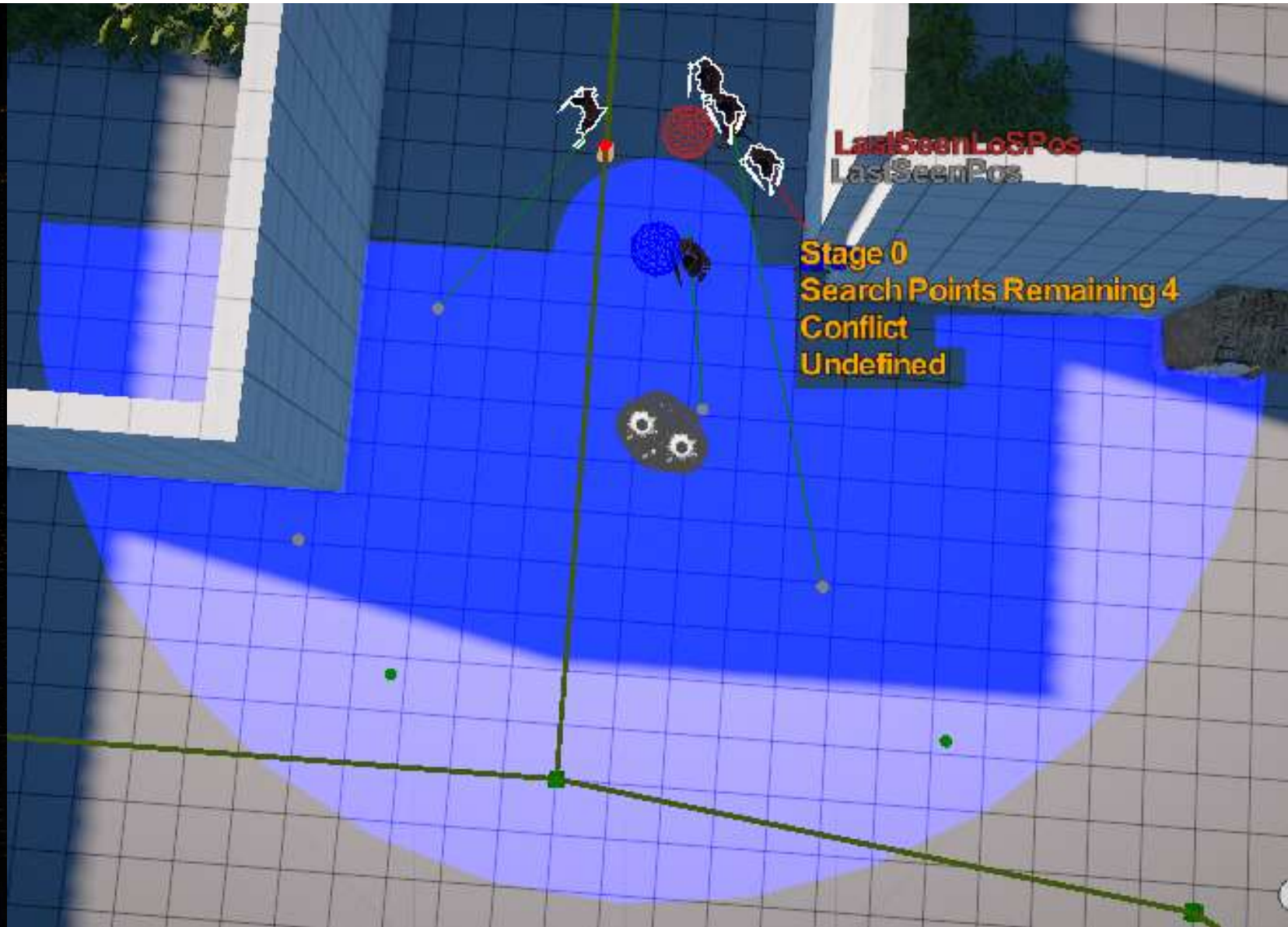


Environment Awareness

Last Known Position (LKP)

LKP





LastSeenLoSPos
LastSeenPos

Stage 0
Search Points Remaining 4
Conflict
Undefined



Ghost Mode
[B] attach to ground
Last Seen Pos
Last Seen Pos
Can't see him

Stage 1
Search Points Remaining 12
Conflict
Undefined

Y Cheats

Daemon: IDLE

40

Fight





Awareness to other Actors



Group Bark System

Daemon: IDLE

40

Ghost Mode
March to ground

Search

Leader
Intention: Search

Y Cheats

1280x720





Daemon: IDLE

40

1280x720



Task Transfer



Detecting Player

Detecting Player

Task Transfer

Daemon: IDLE

40



1280x720





Task Propagation

Daemon: IDLE

40



1280x720



Conclusion

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Giving deeper awareness to our AI gave it more emergent and believable behaviors.

Conclusion

Having awareness systems working in parallel to our reaction system allowed for more adaptative NPCs.

Conclusion

Keeping our reaction logics self contained made them easy to follow and understand



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Thank you!

QUESTIONS?

