Spike Outcome Report

Number: 07

Spike Title: Emergent Group Behaviour

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Goals:

Goals/Deliverables: [CODE] + [SPIKE REPORT]

Create a group agent steering behaviour simulation that is able to demonstrate distinct

modes of emergent group behaviour. In particular, the simulation must:

• Include cohesion, separation and alignment steering behaviours

• Include basic wandering behaviours

• Use weighted-sum to combine all steering behaviours

• Support the adjustment of parameters for each steering force while running

Technologies, Tools, and Resources used:

Sublime Text 3

Lecture on Autonomously Moving Agents

Files from lab 06

Tasks undertaken:

* Read lecture on Autonomously Moving Agents

* Read goals for Spike

* Make certain you are familiar with the files from lab 06

* Add new key presses that will control cohesion, separation, wander and alignment

* Add a dictionary that will control the levels for cohesion, seperation, wander and alignment (set initially to 100)

* Using code from the lecture, create new functions in agent for cohesion, separation and alignment

* In main create a function that will draw on the screen the current levels of cohesion, separation, wander and alignment

* Back in agent create a function called emergent that uses all four of cohesion, seperation, wander and alignment to designate force, using the code from the lecture.

* Limit force either with a max_force value in init or using truncate in emergent.

*test to make sure everything is working, fix compiling errors

*test different value combinations for cohesion, separation, alignment and wander to make certain each is working (test each individually with the others set at 0).

What we found out:

* How to sum together steering behaviours

* How to truncate

* How to program cohesion, seperation and alignment as force modifiers

Recommendations [Optional]:

* Wander had to be divided by 100 because its force was too strong

* Has increased confidence and knowledge of the team