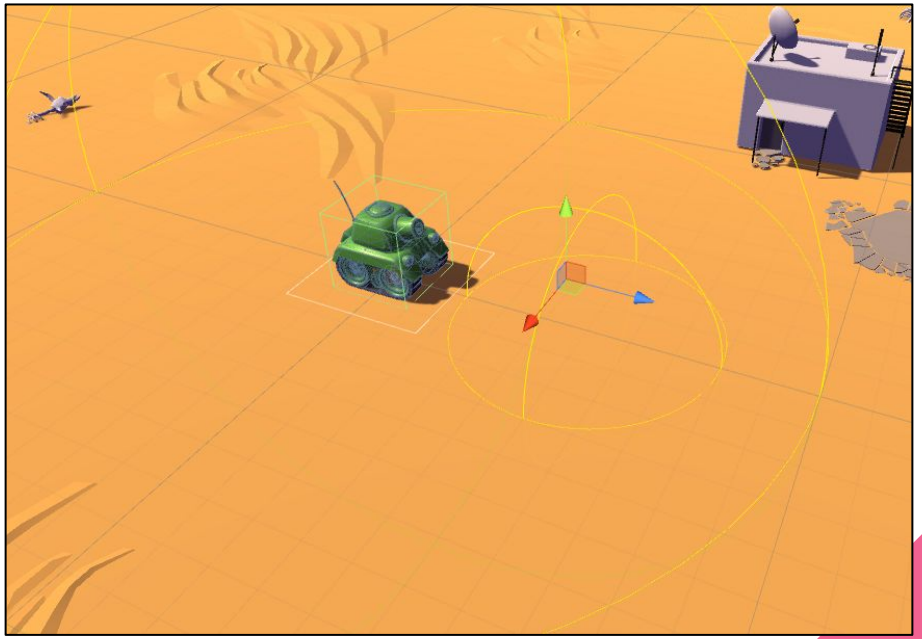
AI: Steering Behaviors 3

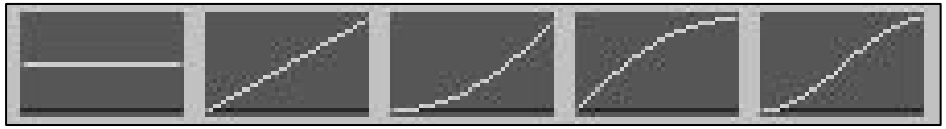
Ricard Pillosu - UPC

Wander Implemented

- Take your time to compare your implementation with teacher’s



Unity cool stuff

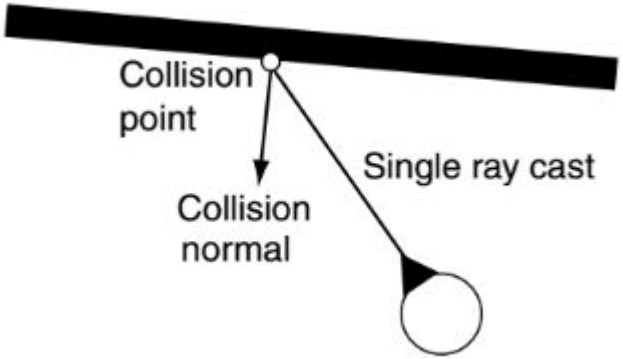


- AnimationCurves allows us to generate any curve and evaluate at some point
- With LayerMask we can filter searches to only GameObjects in that layer
- With foreach it's like a simplistic for (be advised, it is slower than for)
  - `foreach(Collider col in colliders)`
- RayCast allow us to test collisions against *GameObjects* with colliders
  - Will return true on hit and fill a RayCastHit
- Serializable classes
- Arrays of serializable classes are cool :)

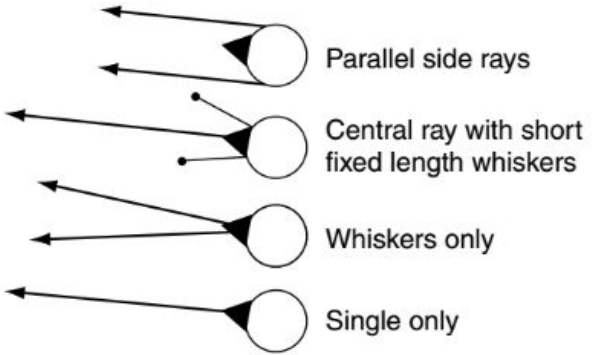
TODO 1 : Separation

- Atomic behaviour that:
  1. Searches for all other tanks in the vicinity (configurable)
     a. Move all agents to a new Layer
  2. Calculates a vector to simulate repulsion
  3. The strength of the vector comes from a curve
  4. Sum up all the vectors from all the agents to separate from

TODO 2 : Obstacle avoidance



- Delegate (on seek) behaviour that:
  1. Cast as many rays as configured to
     a. Use a serialized class that defines direction and length
     b. Create a layer of obstacles and filter with them when casting rays
  2. If one hits, it calculates a “escape target position”
  3. Use the hit position and the normal que genei
  4. Then execute Steer to that point



Homework

- No homework, just have all behaviours finished :)