

Composable Group Behaviors

Perpetual Amoah

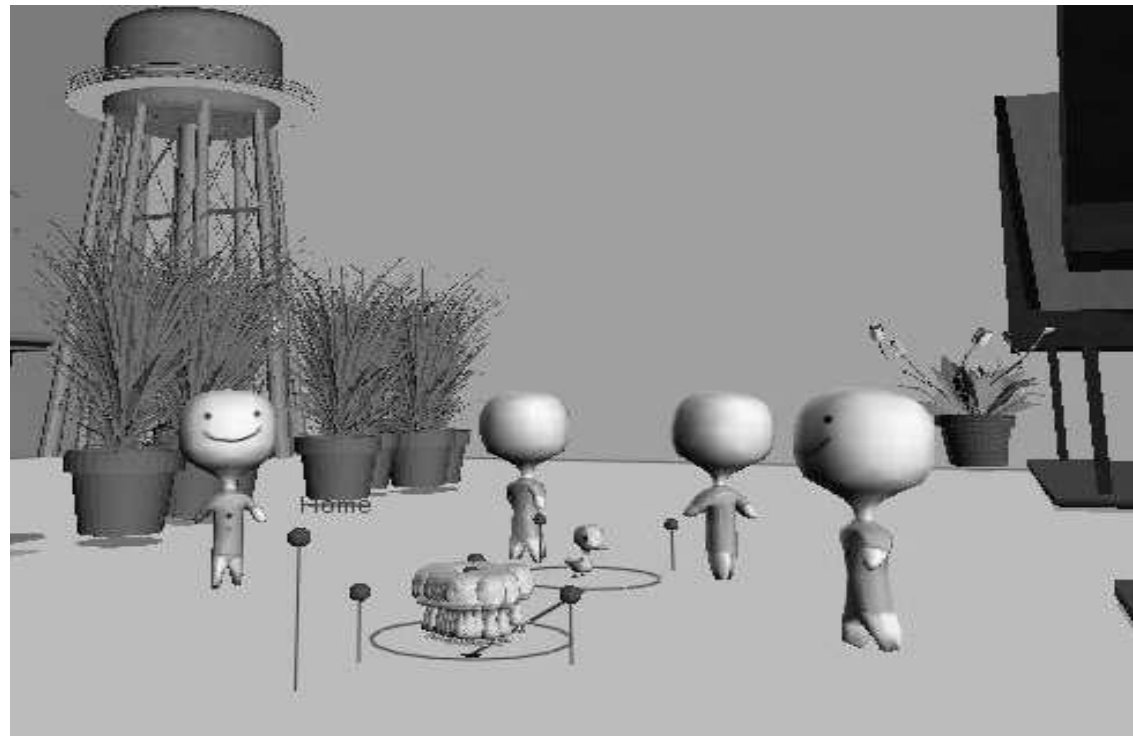
<http://parasol.tamu.edu/~pamoah>



Composable Group Behaviors



Composable group behaviors can be defined as the process of putting together simple basic behaviors to create more complex behaviors.



Project Goals

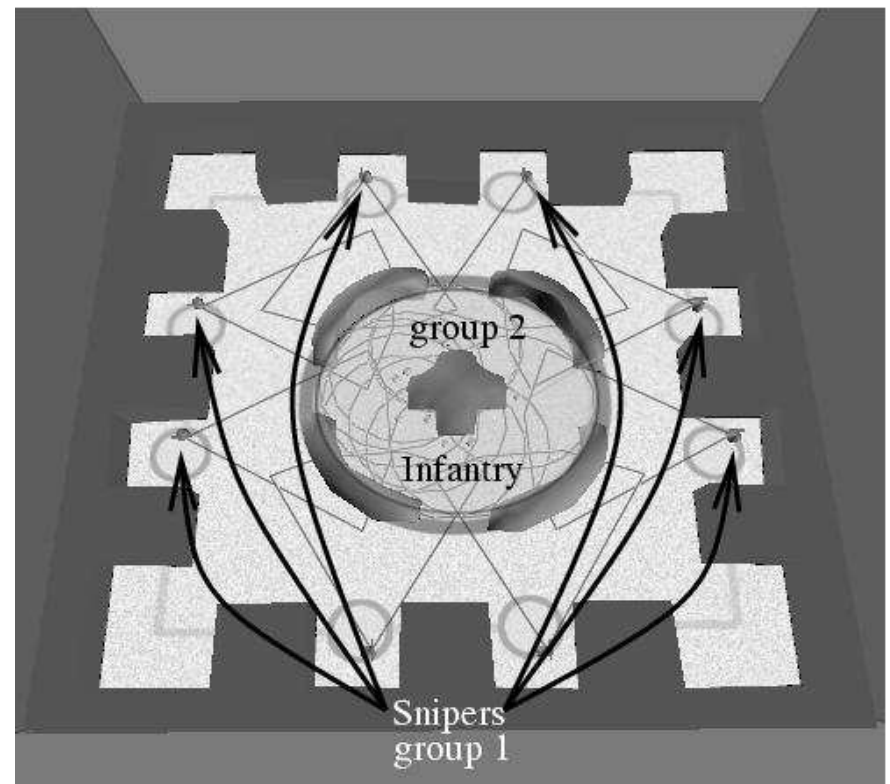


Our goal is to investigate methods to facilitate the generation of complex group behaviors for application such as games, virtual reality, robotics and biological simulation.

- I am working on creating more basic behaviors that can be applicable to a wide range of scenarios.

Relationship to other projects

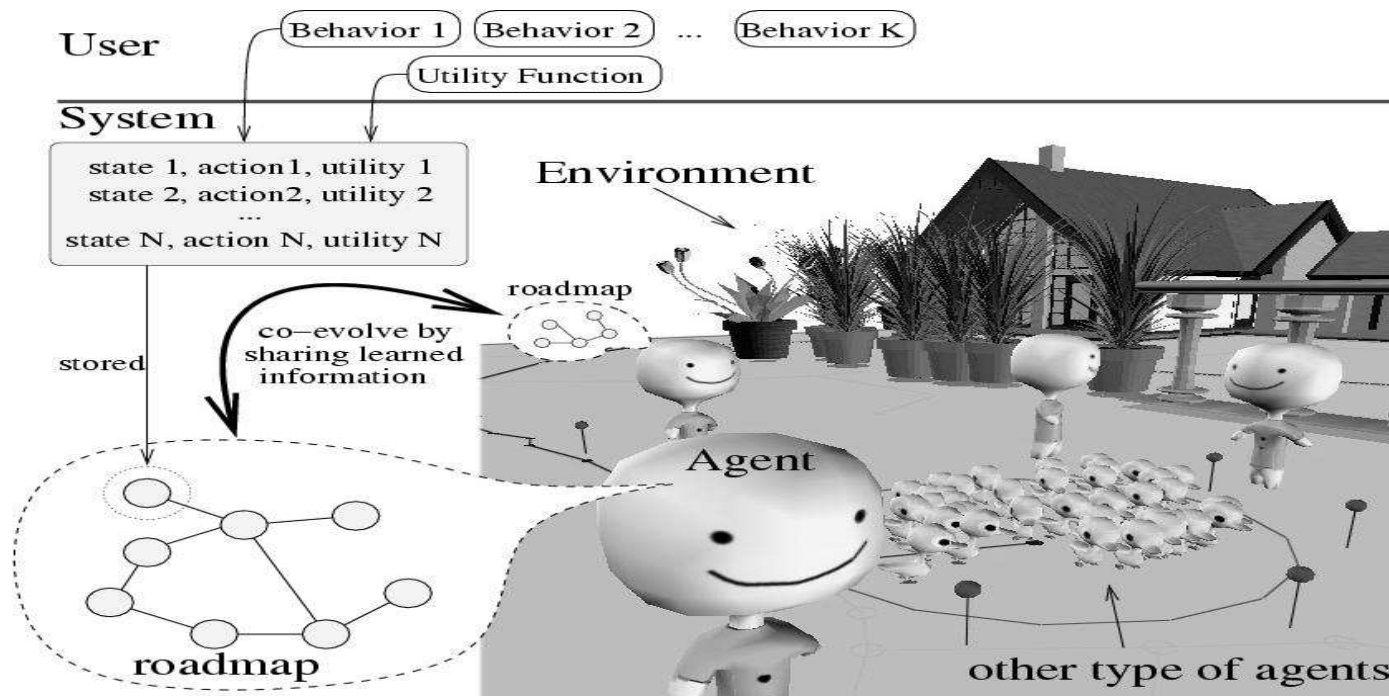
- Shepherding
- Pursuit-Evasion
- Dinosaur simulation and others



Approach



Our general approach is to provide a framework that automatically combines simple composable behaviors such as searching, attacking, waiting, running away and hiding into more complex behaviors.

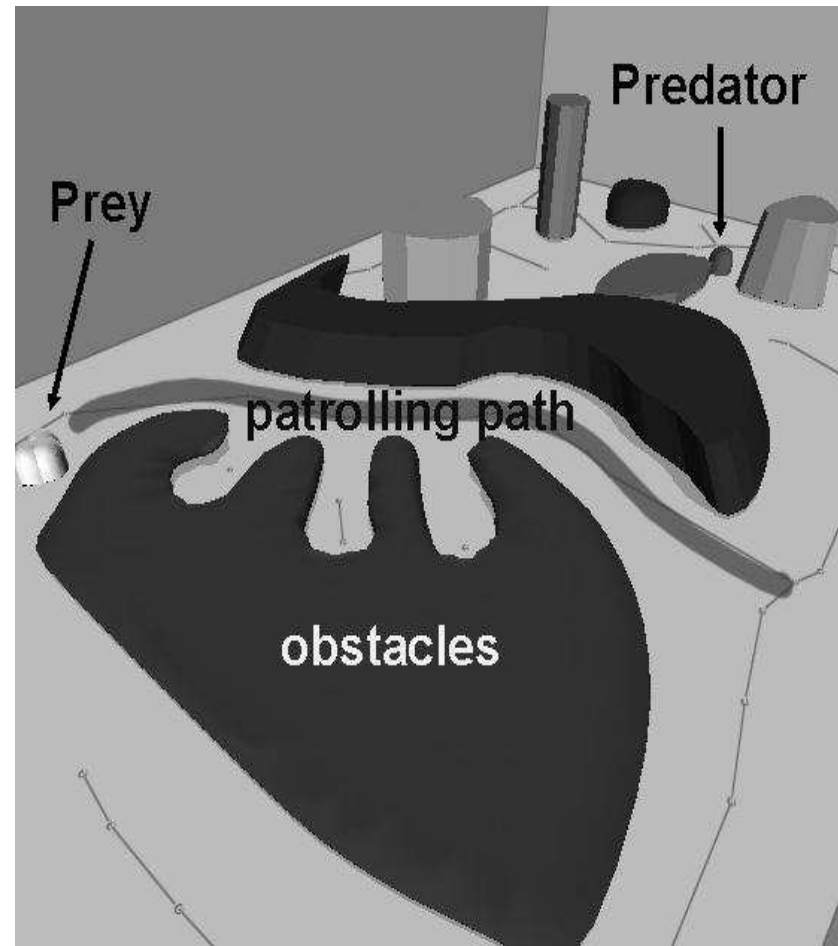


Achievements

Parasol

For the past four weeks I've been able to :

- developed simple python programs that –
 - Computes the area of different shapes.
 - Compute distances, speed, magnitude etc.
- Created two basic behaviors
 - Follow_in_a_circle
 - Follow_in_surrounding

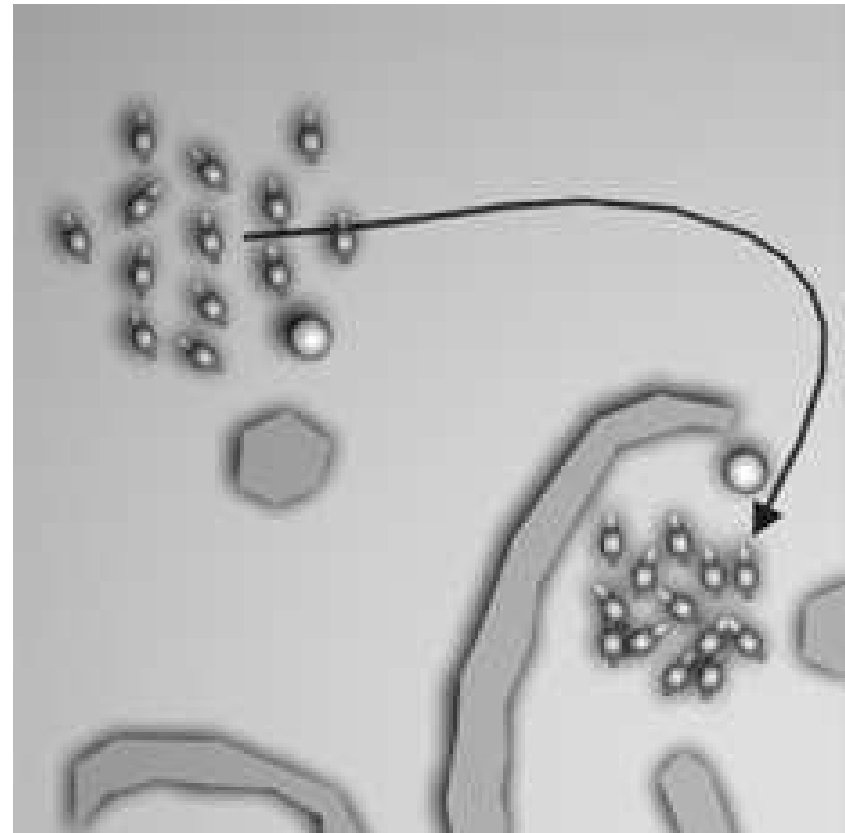


Possible Basic Behaviors



Some basic behaviors I will be working on are:

- Run to group when scared
- Search in groups
- Follow “leader” in formation
- Attack in group



Video on behaviors created



The following is the video of follow_in_surrounding behavior.

Video

Conclusion



In this work we are proposing a framework that will ease the process of creating natural and complex group behaviors.

I am proud to be part of this team and I'm willing to contribute my best to bring the overall project to a perfect end.

