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

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.