Affordances

1. The agents start to chase a player controlled ball around the area, once one agent catches ball they stop chasing it. This is implemented using a Race to have to agents navigate to the ball.
2. Next, two of the agents square off and the third agent is a spectator cheering on the fight. Since the BodyMecanim actions were very limited, one agent simply threatens the other making him cry.
3. Then, the three agents arrange themselves in a triangle facing the center of the area and simultaneously dance for 10 seconds.
4. After that a new larger agent will be summoned in the center and roar while the original 3 cheer for their creation.

Behavior Tree

The Behavior Tree has four subtrees, the Chase Tree, Fight Tree, Dance Tree, and Summon Tree. The chase tree is simply its own root which uses a Race node to have all 3 agents chase after the player controlled ball. Next, the fight tree has runs a sequence with 4 sequence parallels. The first sequence parallel moves the agents to the proper location. The second sequence parallel orients the agents towards the center. The third sequence parallel has one agent cheer on the fight while the two fighters get into the fighting stance. The fourth sequence parallel runs two sequences: the first is the spectator cheering then clapping; the second is fighter A threatening B, B crying, and A cheering. The Dance Tree has one node connected to its root; in root it has the agents move to their designated position and orient themselves, the node is what triggers the agents to begin dancing. After the Dance Tree, the summon tree starts and consists of a sequence parallel with two components, a sequence and another sequence parallel. The sequence first calls another node called summon which activates a larger version of the three agents in the scene, then it has the agent play two gestures using the BehaviorMecanim. Simultaneously the sequence parallel has the other three agents play one gesture each.

Controls

WASD to move the camera, Mouse to aim. Q and E lower and raise the camera (y axis)

Arrow keys move the ball.

Video: