**Bullet Shooting System for CrowdFX**

Bullet shooting system adds on the ability to shoot bullets in CrowdFX. In conjunction with the sample scene of animation blending system, this enable shooting of bullet when the target is in range and the actor is in ready to shoot position (i.e. not in transition to shooting).

To use this shooting bullet system, you will need 'Shoot Bullets' compound and additional compounds that complement it if needed. You will also need an empty point cloud as a placeholder for the bullets.

Connect 'Shoot Bullets' compound to the root of 'Animation_Blending' tree. It has several input ports.
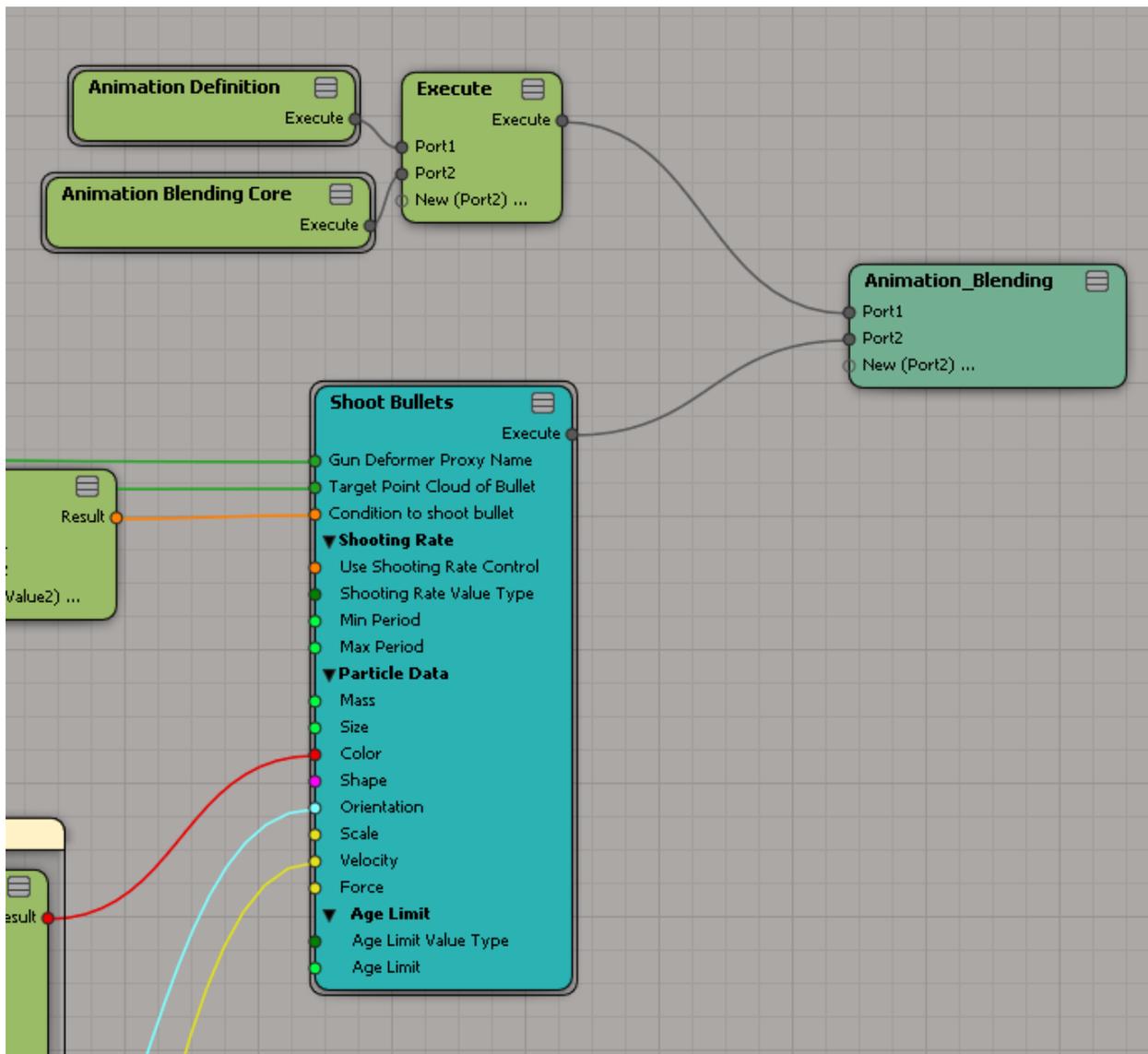
1. Gun Deformer Proxy Name
   The deformer of the gun as reference to create the bullets.

2. Target Point Cloud of Bullet
   The point cloud that will be used to create the bullets' particles.
3. Condition to shoot bullet
   When should bullets be created. In sample scene, I am using the condition when the actors are in a specified state and after the transition to shooting mode is done.
4. Shooting Rate
4.1. Use Shooting Rate Control
   Shooting rate system will be applied so the bullets will not be fired every frame. Includes some randomization.
4.2. Shooting Rate Value Type
   Frames or seconds will be used accordingly for shooting rate.
4.3. Min Period
   Minimum duration in which actor will shoot again.
4.4. Max Period
   Maximum duration in which actor will shoot again….
5. Particle Data
   Self-explanatory particle system data.
5.1. Mass
5.2. Size
5.3. Color
5.4. Shape
5.5. Orientation
5.6. Scale
5.7. Velocity
5.8. Force
5.9. Age Limit
5.9.1. Age Limit Value Type
   Frames or seconds will be used accordingly for particle age limit.
5.9.2. Age Limit

After you are done with setting up everything, go to your point cloud, create a simulated ice tree. Now the operation stack will show up. Move the tree created by Crowd to Simulation stack and you could delete the created simulated tree as it is no longer needed.

Extra compounds that could be used in conjunction with 'Shoot Bullets' Compound

1. 'Is At State'
   Plug this to 'Condition to shoot bullet' and choose the animation state in which you would like the bullets to be shot.
2. 'Is In Blending Mode'

Plug this to 'Condition to shoot bullet' so that bullets are shot only after blending is done (i.e. after the transition to blended animation ends).