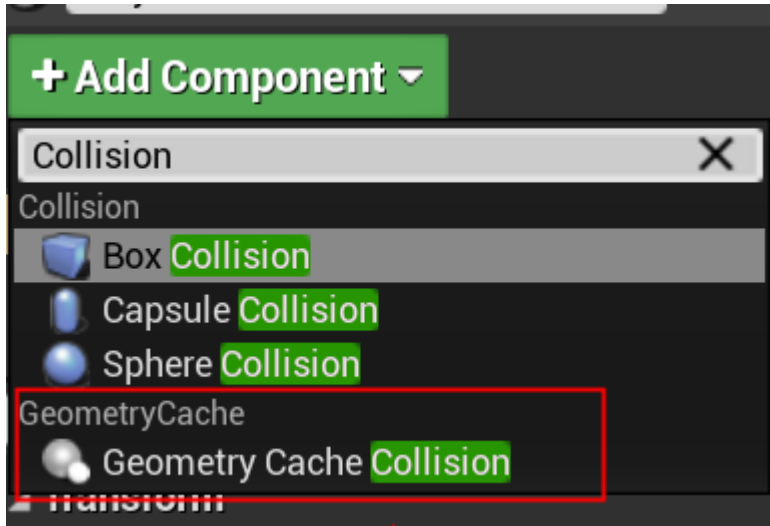


What is it used for?

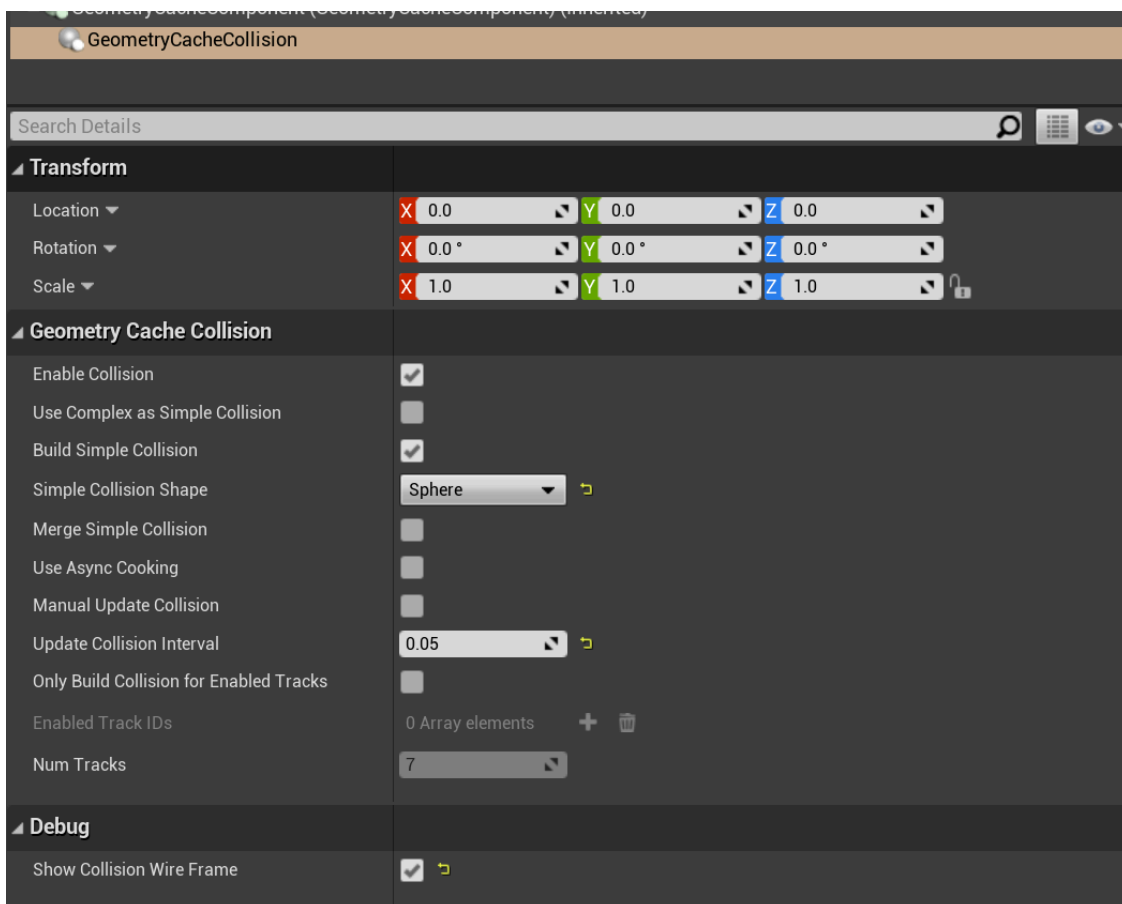
Add collision for Alembic GeometryCache animation.

How to use ?

Attach the "Geometry Cache Collision" component to GeometryCacheActor.



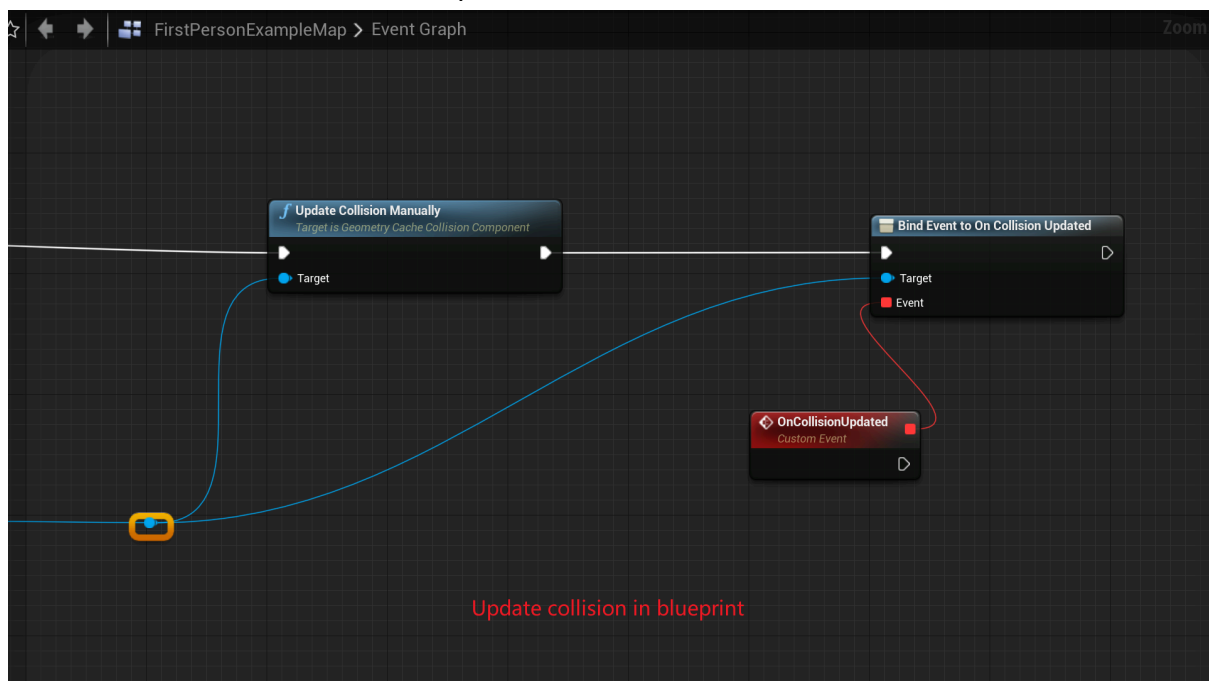
Properties



- **Transform:** You can add location offset, rotation, scale for the collision geometry.
- **EnableCollision:** Enable collision for geometry cache
- **UseComplexAsSimpleCollision:** Controls whether the complex (Per poly) geometry should be treated as 'simple' collision. Should be set to false if this component is going to be given simple collision and simulated.
- **BuildSimpleCollision:** Controls whether we should build simple collisions for geometry cache.
- **SimpleCollisionShape:** You can choose box or sphere shape for simple collision.
- **MergeSimpleCollision:** Controls whether we should merge all enabled tracks and simple collisions to a large one.
- **UseAsyncCooking:** Controls whether the physics cooking should be done off the game thread. This should be used when collision geometry doesn't have to be immediately up to date (For example streaming in far away objects)
- **ManualUpdateCollision:** Controls whether to update collision manually. When enabled you can update collision by call Blueprint Function "UpdateCollisionManually"
- **UpdateCollisionInterval:** Time interval for updating collision. When equal 0.0f, will update collisions every frame.
- **OnlyBuildCollisionForEnabledTracks:** Only build collision for enabled geometry cache tracks.
- **EnabledTrackIDs:** Enabled geometry cache track id list.
- **ShowCollisionWireFrame:** Show collision wireframe at runtime for debug. The wireframe will be hidden in a packaged game.

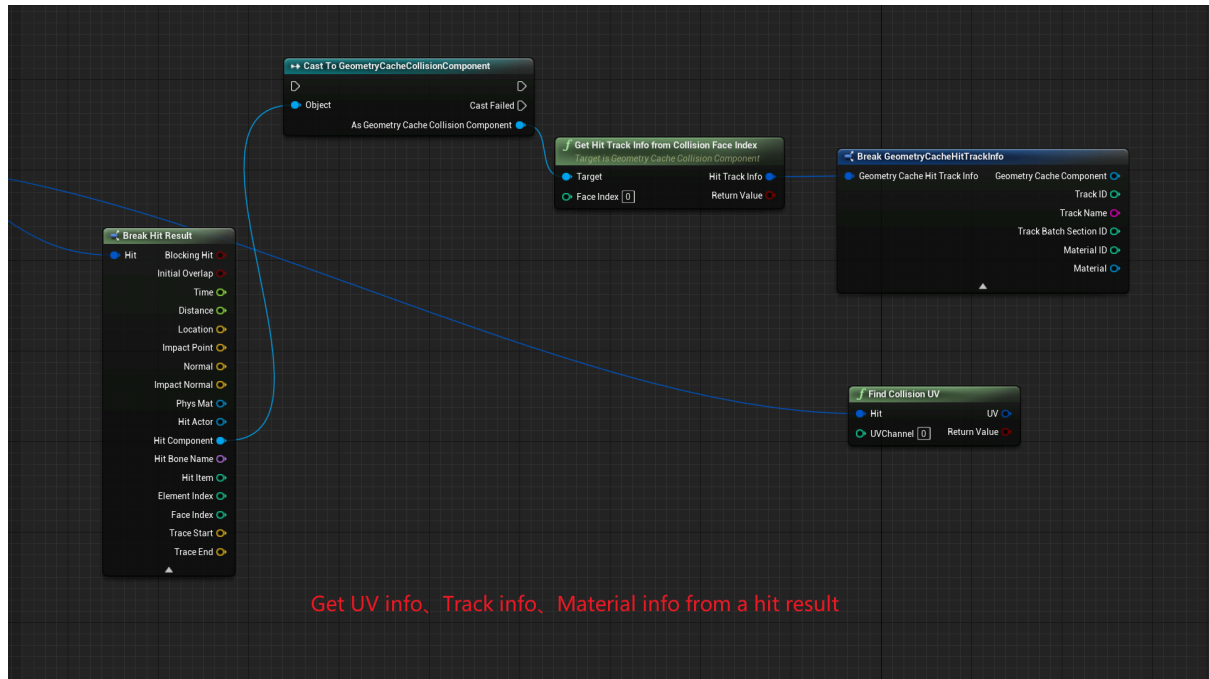
Blueprints

1. Update collision in blueprint
 - call "UpdateCollisionManually" for updating collisions.
 - bind event to "OnCollisionUpdated" for callback.



2. Get info from a hit result(Complex collision)

- Hit Component should be casted to "GeometryCacheCollisionComponent", and then you can call "GetHitTrackInfoFromCollisionFaceIndex" for hit GeometryCacheComponent, Track index, Track name, Track batch section index, Material index, Material.
- Get UV Info by calling "Find Collision UV", it only works when "PhysicsSettings->bSupportUVFromHitResults" checked and there is UV info in your GeometryCache.



Caution

1. You should be very very careful when updating complex collisions by Tick. As building complex collisions need large amounts of computation, it will make your program slow. Some advices for building complex collision:
 - You can update complex collisions manually in Blueprint only when needed.
 - You can reduce enabled tracks.
 - You can build a special track for your GeometryCache, which is with less triangle number and only used for creating collisions.

In my test, the triangle number for complex collisions should be less than 5000 for keeping 60fps when updating complex collisions every frame.

2. "GeometryCacheCollision" component's detail settings are mainly for creating collisions. Other Settings for Collision and Physics should be set in GeometryCacheComponent.