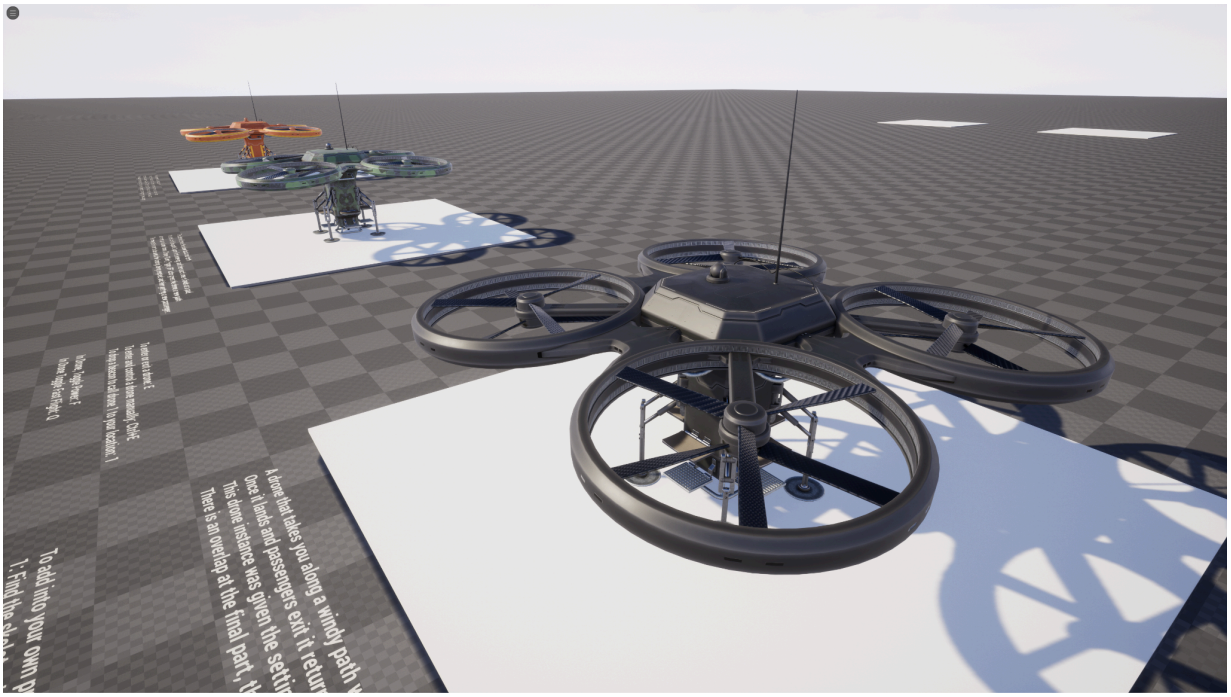
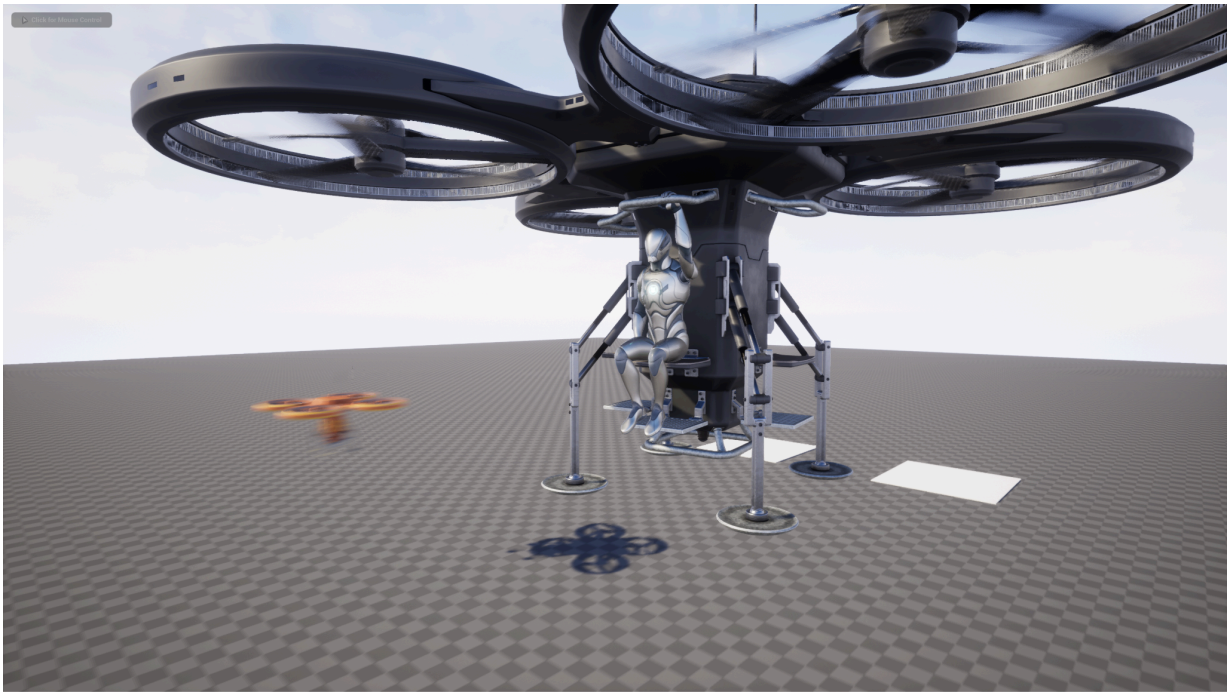
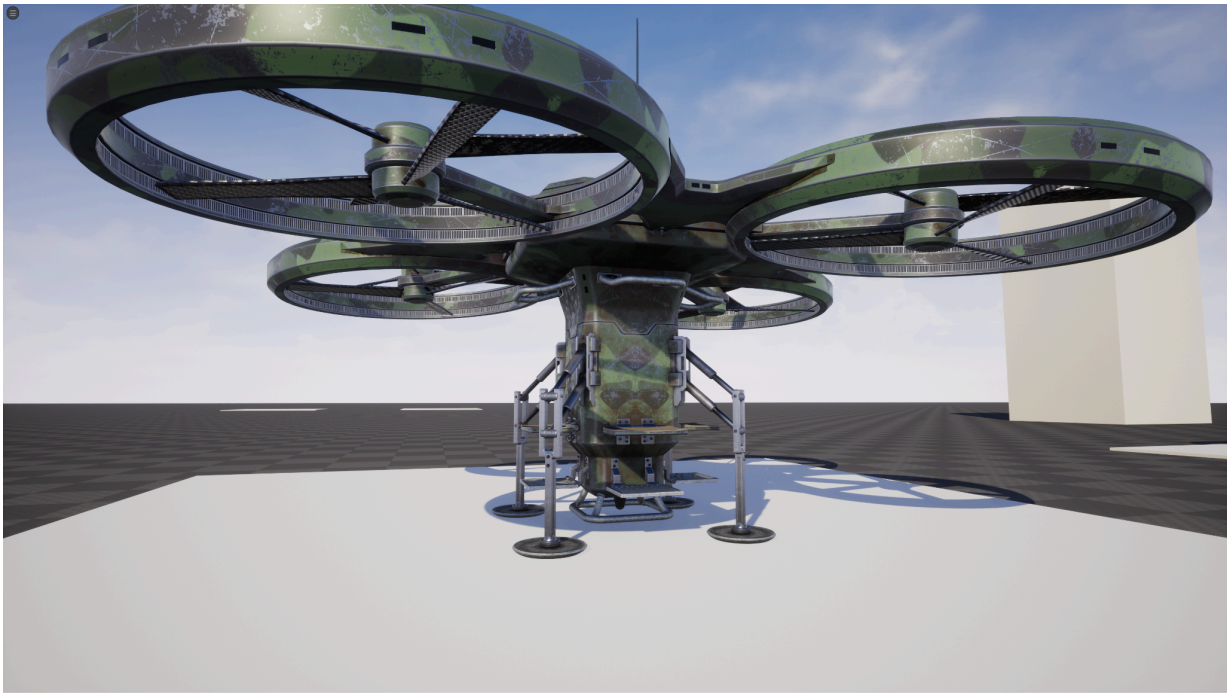
Flying Transport Drone

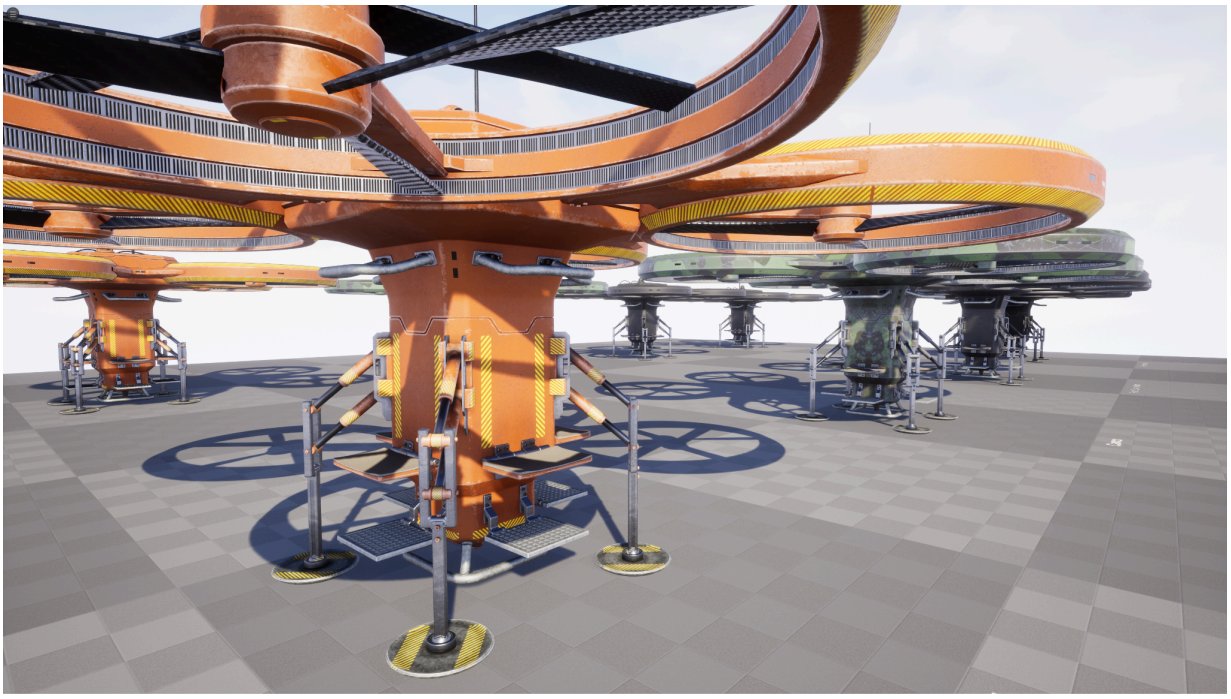
This package contains one Flying Transport Drone. This consists of a pawn actor that can fly around between points using preset paths, or be manually controlled. An example third person character that is set up to be able to enter and exit it, a path actor, and two actors to help you control/direct it during runtime. All textures and materials needed to have three types of base materials plus color masks to allow for further modification. Audio effects are also included for the rotor sounds. The basic idea is you can have a flying drone that can land, pickup up to four people, and then fly on to another location. It can also have one person manually control it and fly it around. It works in multiplayer as well as single player. The AI follows paths the player creates for it, though it only follows the splines as is, with no additional collision avoidance or navigation capability beyond following the spline as is, and landing/taking off straight up/down.

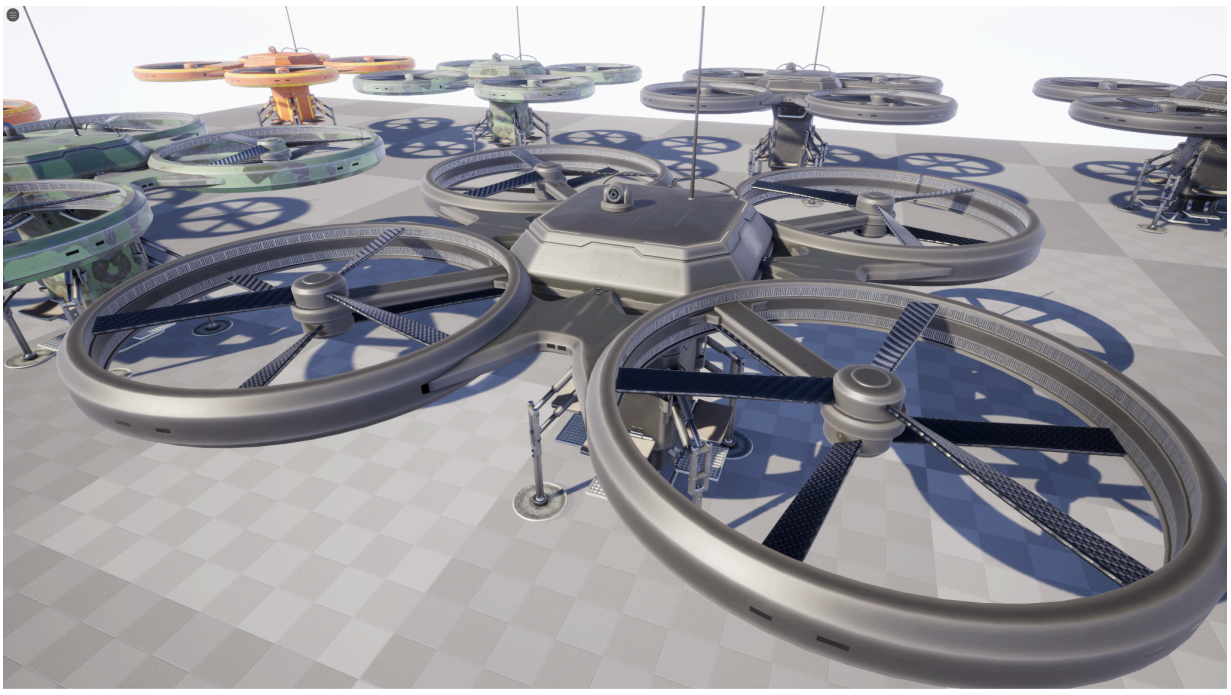
Demo Video





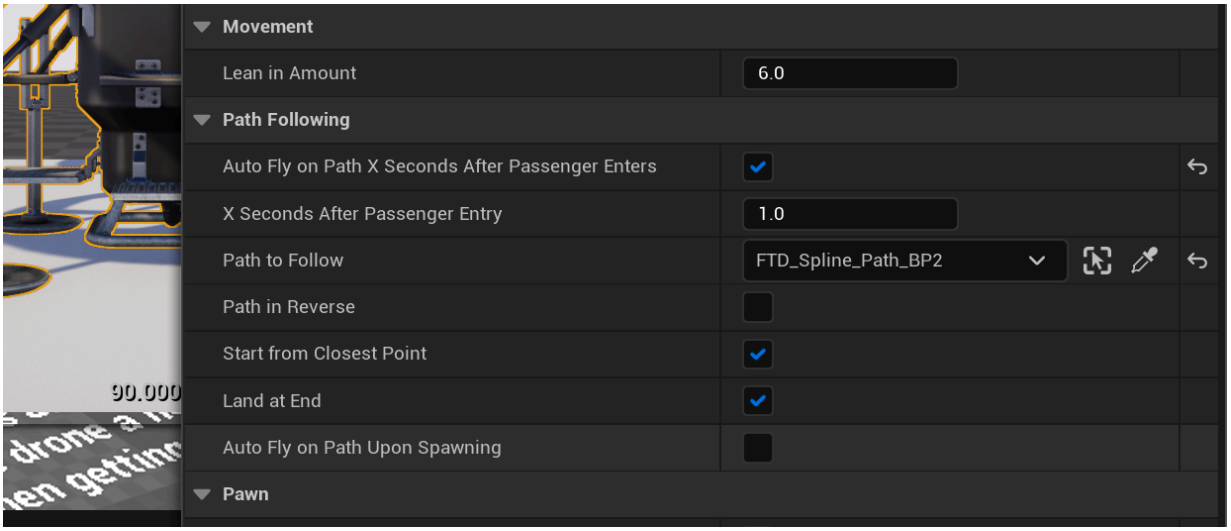






How To Use

To Control the drone, you can set the options in the spawned instances to start flying on a path, or fly on a path upon someone entering by default. Feel free to modify/add your own conditions into the actors as is needed for your project. With this you can have default actions for freshly spawned transport drones.



To control them during runtime you'll rely on the "Fly On Path FTD" message you can send to the drones themselves.

If you link a path and flight conditions it will follow that if not manually being possessed by a player.

The FTD_Beacon_BP and the Drone_Path_Trigger_FTD_BP both use this to control the drone.

The beacon just calls a drone to it before then giving it a new path to head out on, while the path trigger will upon being overlapped forward it's commands to the drone. You can see the results on this demo map, forwarding drones back and forth.

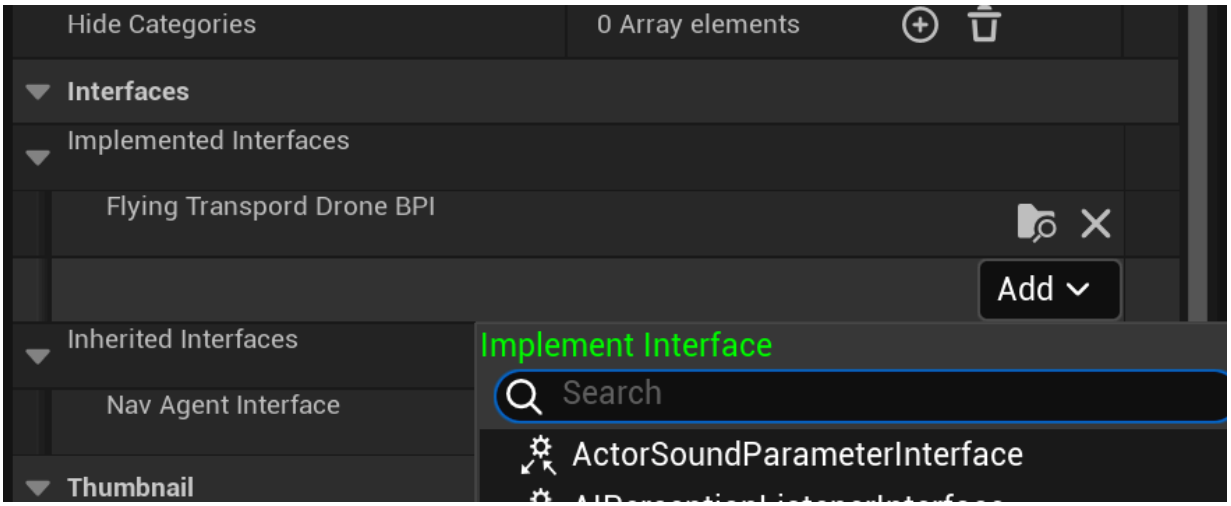
For the FTD_Spline_Path_BP, you can create paths for the drone to fly on. If you haven't worked with splines, just drop it into the level, then click on the spline points so select the spline points themselves, to move or rotate them. Holding ALT moving one will create a new point, as well. Remember the drone follows the spline path, not just the points, so careful with the tangents (scale the points).

To add into your own project

1: Find the skeleton in the demo folder (ue4 or ue5) that matches your own projects need, click delete, and replace references with your own projects skeleton. After doing this save all. This will associate the animations onto your own projects skeleton.

2: Open the "FTD_ThirdPersonCharacter_BP" along with your own character.

3: In your character, go to Class Settings, then Interfaces.
Add the Flying_Transport_Drone_BPI interface. Then compile.



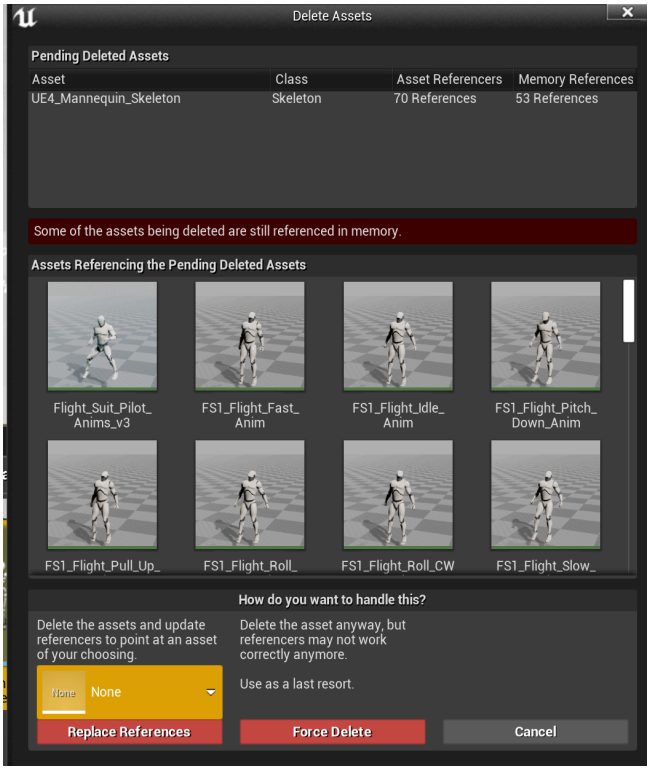
4. From the example third person character, copy over the Interact code,
and possibly the beacon code if you want so it can enter/exit.
Note that you may need to add/modify some of the enter/exit code here for your own character, especially if not a default character, of it it has other code/actions you must disable while it's a passenger.

5. Open your characters Animation Blueprint, and the FTD_Thirdperson_AnimBP from this project.

6. Add the FTD Blueprint Interface to your animation blueprint, then compile.

7. Copy/paste the code in the event graph over, then the request seat interface, and finally the anim graph.

Further details on the event graphs commenting.Example of adding the blueprint interface in the “interface” category. Remember to click class settings up top, then add it here, and then hit compile before trying to copy/paste over code that uses this BPI for stuff. This animgraph is where you could replace the sitting animations with your own, so if you have different sized/proportioned/shaped characters they can each have their own sitting/standing animations if needed.

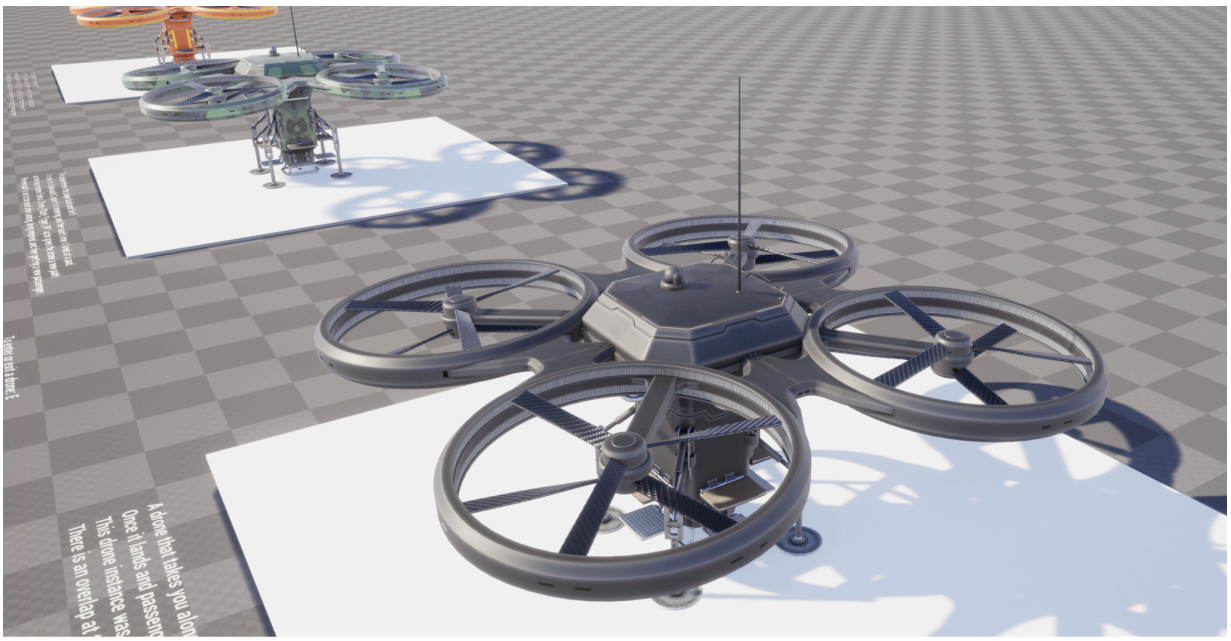


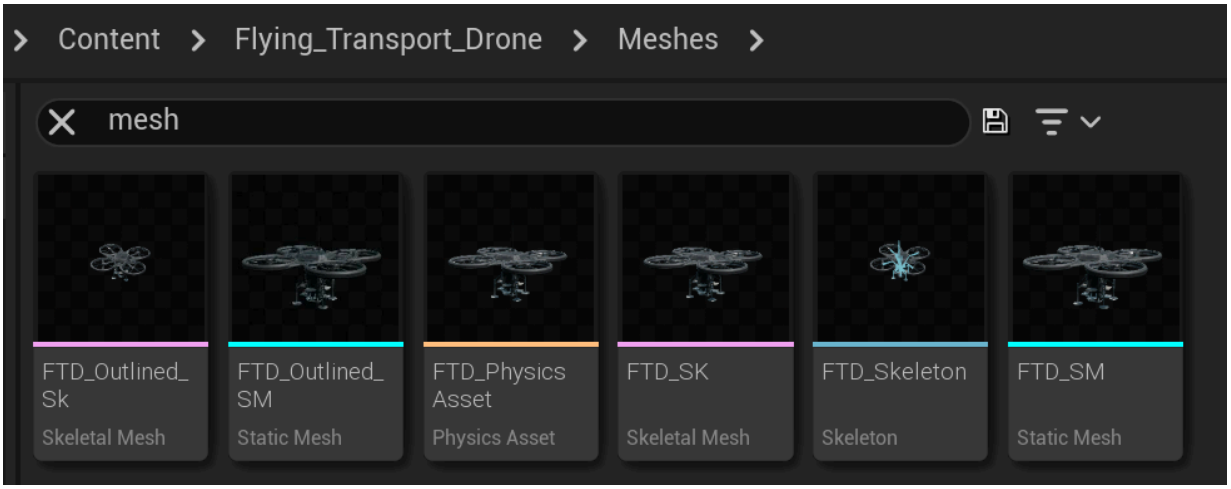
An example of deleting a skeleton, or other asset with references. Lower left, where it says none by default, you can select other assets that might take on these references. In this case, a compatible skeleton could be selected, then “Replace References” clicked and it will delete this skeleton and assign all animations/physics assets/animation blueprints/etc… using it, to your newly set skeleton.

For replication, just remember that any new messages/updates you send to the drone should be multicast from server side so all clients get the same updates.

Meshes

Heres the main drone mesh itself. The basic version contains around 100K vertices and 97K polygons. There is also an “outlined” versions of each mesh that is double it’s original (meant to make a black outline around a mesh having a second pushed copy of the mesh with flipped normals and a different material channel).

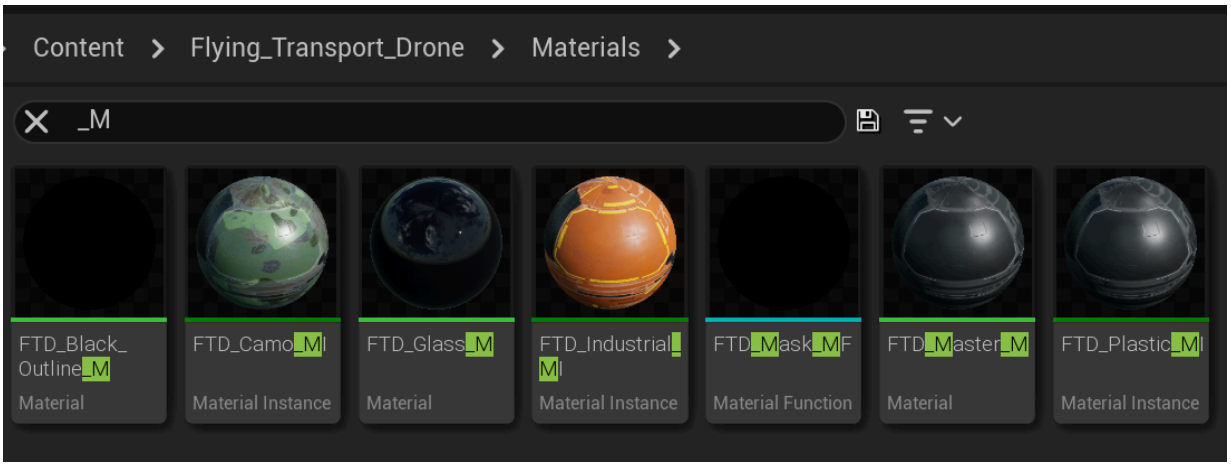


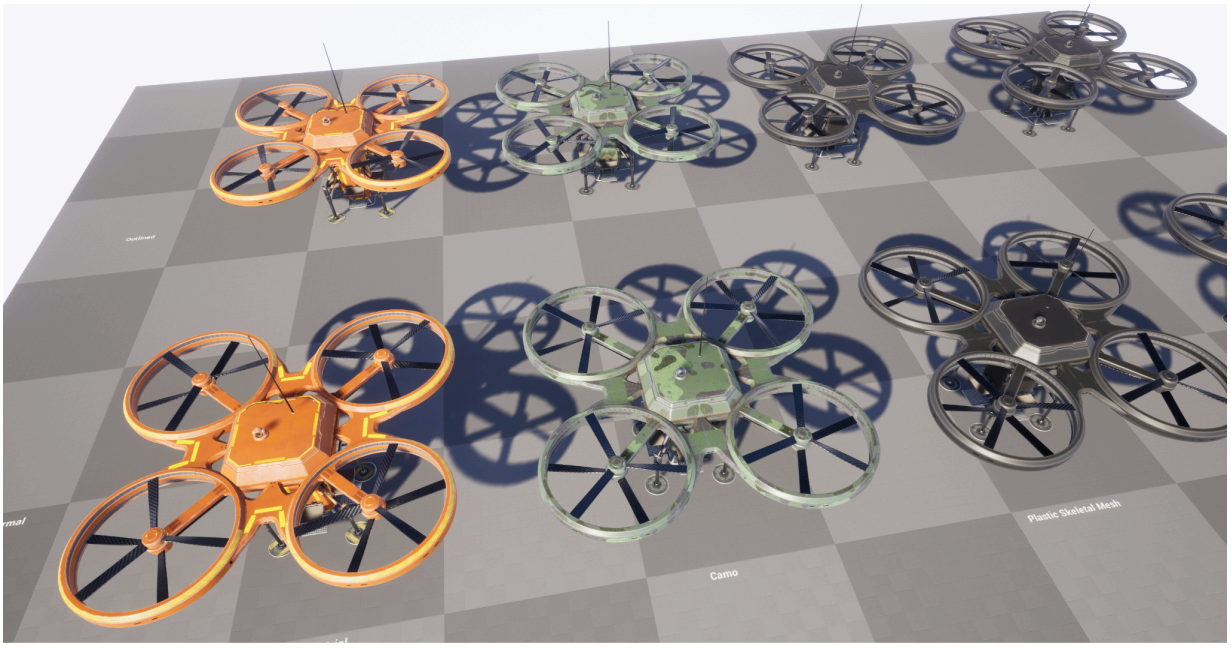


Materials

Materials include some options to allow for basic changes to each material, an example of the “Camo” material type being turned from it’s default greenish to bluish with darker metal.

The pack contains1 material function, 3 master materials, and 3 material instances. There are three material types for most parts, the Plastic, the Camo, and the Industrial type.

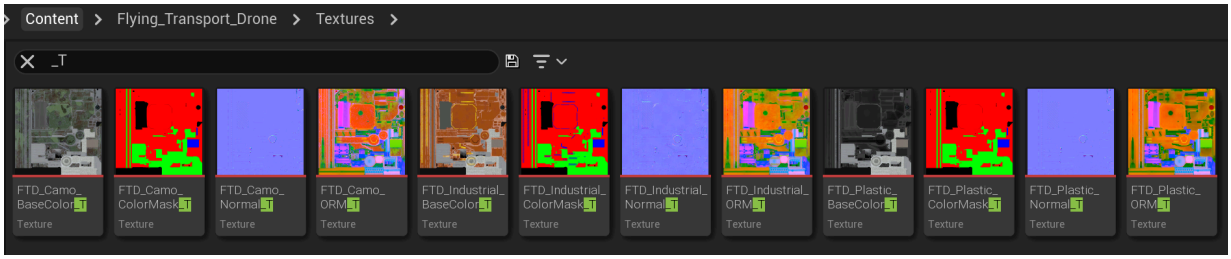


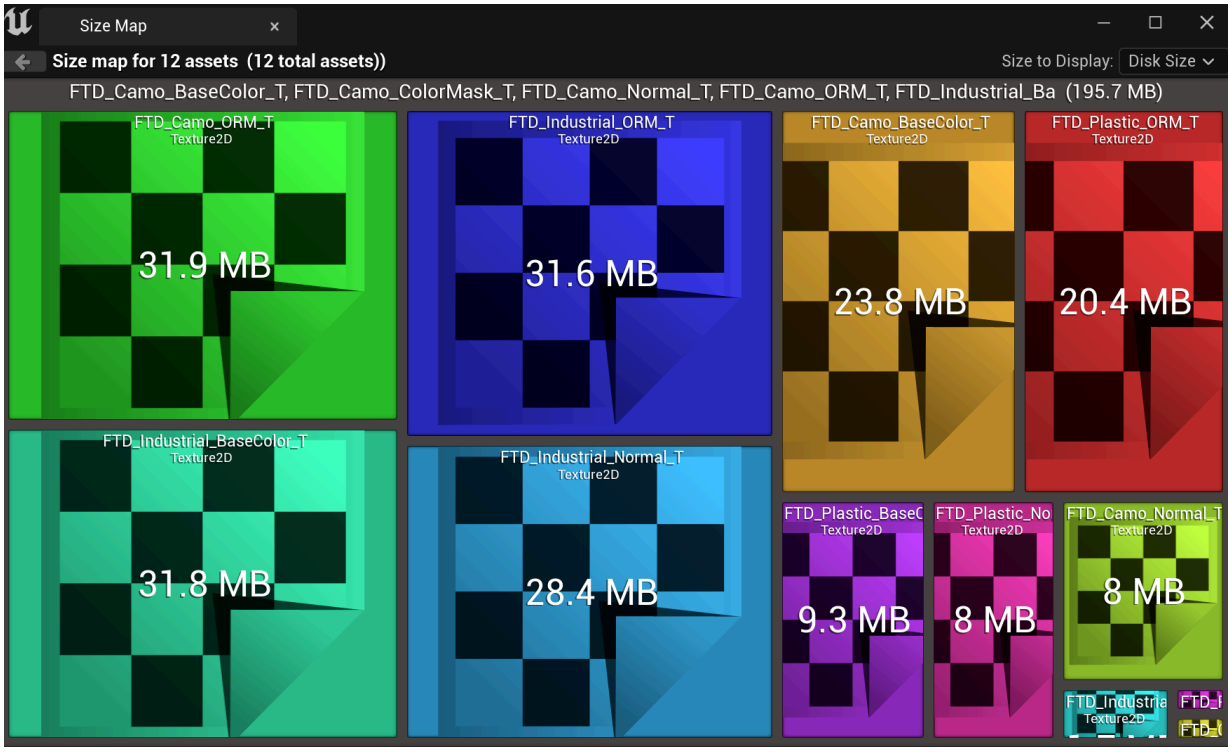

Camo
Plastic Skeletal Mesh

Textures

There are 12 textures for the Flying Transport Drone. One set for echo f the three versions of material.

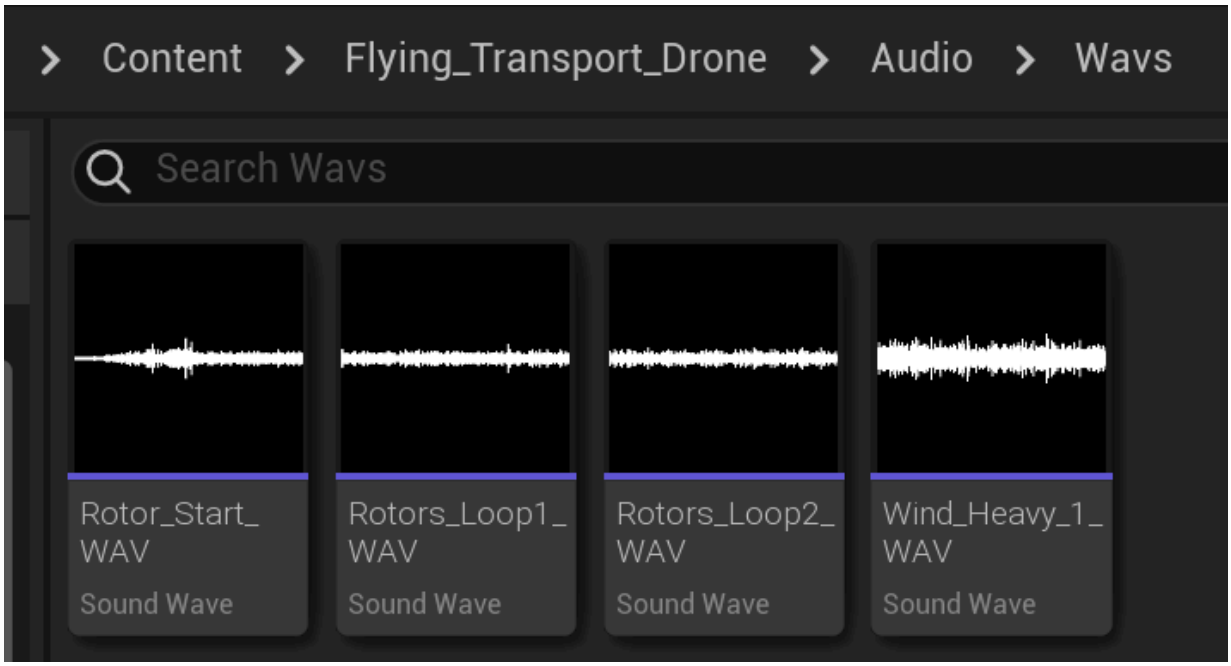
Total size is 195.7MB. Textures are 4096*4096.





Audio

There are 4 audio waves included in the project, plus their corresponding cues and other audio assets for actual use.



Contact Info

Contact me at Pineconedemon@gmail.com or go to my discord channel here where you can chat with others or ask questions. https://discord.gg/d7paEng.

Update History

Q and A