Gear System

Documentation

The Gear System for Unity is an easy to use solution for getting animated gear chains in your game.

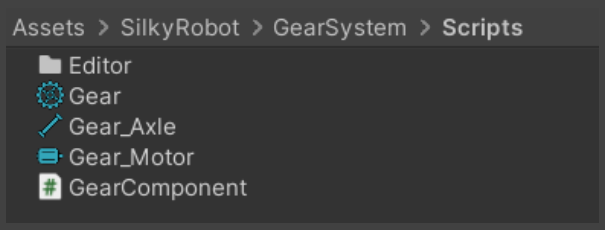
It consists of 3 MonoBehaviour scripts:

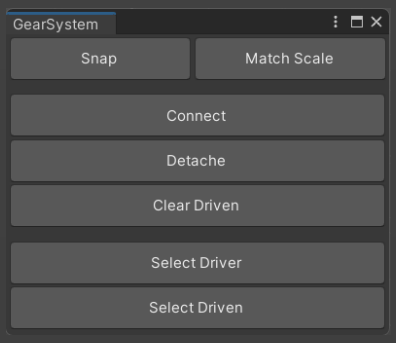
- Gear.cs
- Gear_Axle.cs
- Gear_Motor.cs

There is also an Editor Script that can help with connecting gears together.

Tools / SilkyRobot / GearSystem Tools

The (*GearSystem Demo)* Scene shows how to setup complex gear chains using the included prefabs.

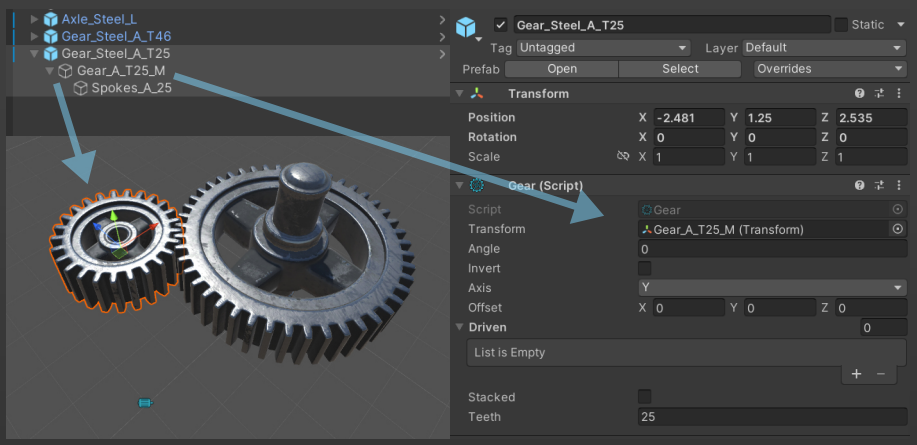




Gears

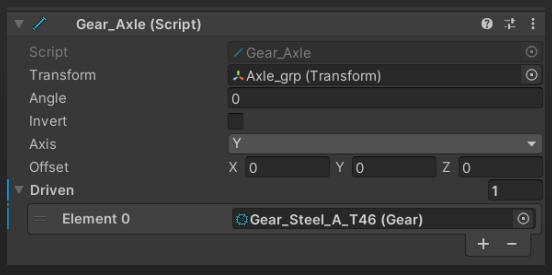
The included prefabs show how gears are supposed to be organised.

The model should be a child of the object that has the ***Gear*** script attached and the *Transform* variable of the gear script needs to reference the model transform. The *Axis* variable controls which rotational axis the model will be rotated. The *Offset* can be used to tweak the rotation an make sure the teeth are visually aligned.
The *Driven* list contains references to the gears or axles that are driven by this gear component. Setting the *Angle* in Edit Mode will turn the *Driven* gears or axles. A gear component can only be driven by one Driver.
The *Teeth* variable needs to match the teeth of the model in order to turn at the correct speed.



Axles

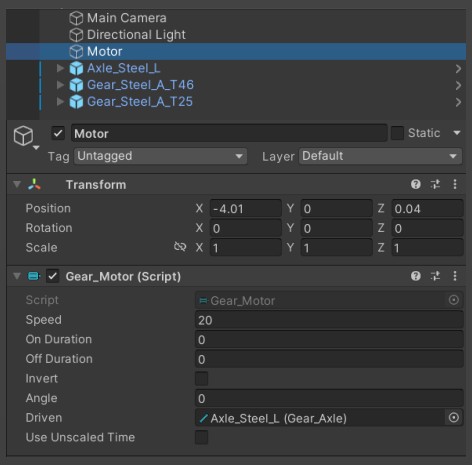
Axles work pretty much the same but will always turn at the same speed as their Driver.



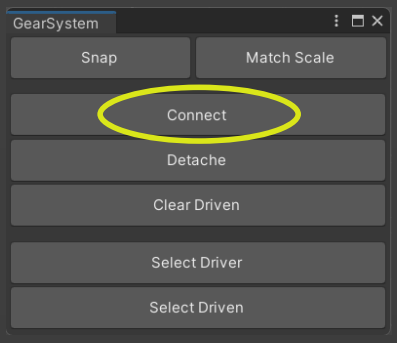
SILKY ROBOT GAME ASSETS

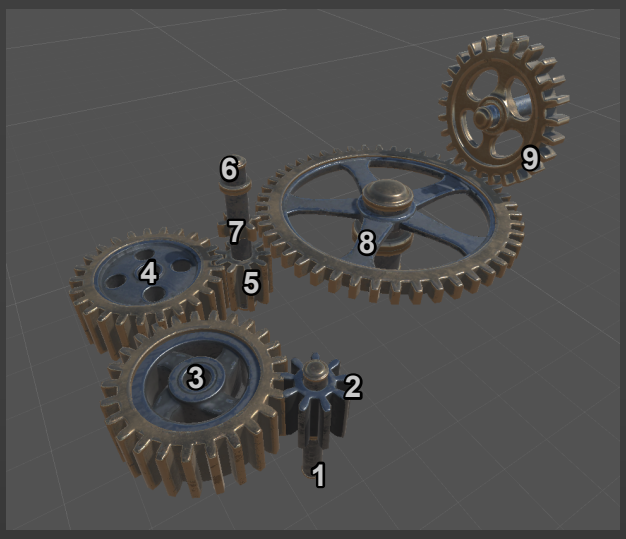
Motor

The ***Motor*** component is used to rotate the gear chain in Play Mode.
It can be attached to any GameObject and references the first gear component in the chain. Set the *Driven* variable to control a gear or axle.
The speed and direction can also be controlled from script.



Example





To set up a gear chain, place some gear prefabs in the scene.
Select them in order an click *Connect* in the *GearSystem Tools* window.
Changing the angle on the first component will now control the rest of the chain.
Create an empty GameObject an attache the *Gear_Motor script* to it.
Set the *Driven* variable to you first gear component in the chain an press Play.
The whole chain should now move.