

How to use

You can define entities' characteristics from "EntitiesController" gameobject's inspector.

By enabling the "Should process in batch" you can find options to exchange performance for simulation quality. Specifically you can set how many rotations to be calculated and applied per frame as well as "fading-out" effects.

When in play-mode a list will appear at the bottom where each entity can be inspected.

Measurements

Number of entities	FPS Without batching	FPS With batching	Rot/Fades
1500	Min 68 Avg 75 Max 120	Min 85 Avg 92 Max 100	500/100
2000	Min 37 Avg 48 Max 68	Min 63 Avg 78 Max 94	500/100
3000	Min 23 Avg 30 Max 37	Min 37 Avg 59 Max 73	500/100

The tests were conducted using the following characteristics:

Sphere radius: 300

Parent rotation speed: 1

Entity: The prefab provided with the package

Colour: The entire spectrum that can be defined by a float value

Speed range: 0, 5

Life-time range: 9-20

Machine specs

Processor: Intel(R) Core(TM) i7-9700K CPU, 3.60GHz

Ram: 16 GB

GPU: Asus Radeon RX 570 ROG Strix OC 8GB