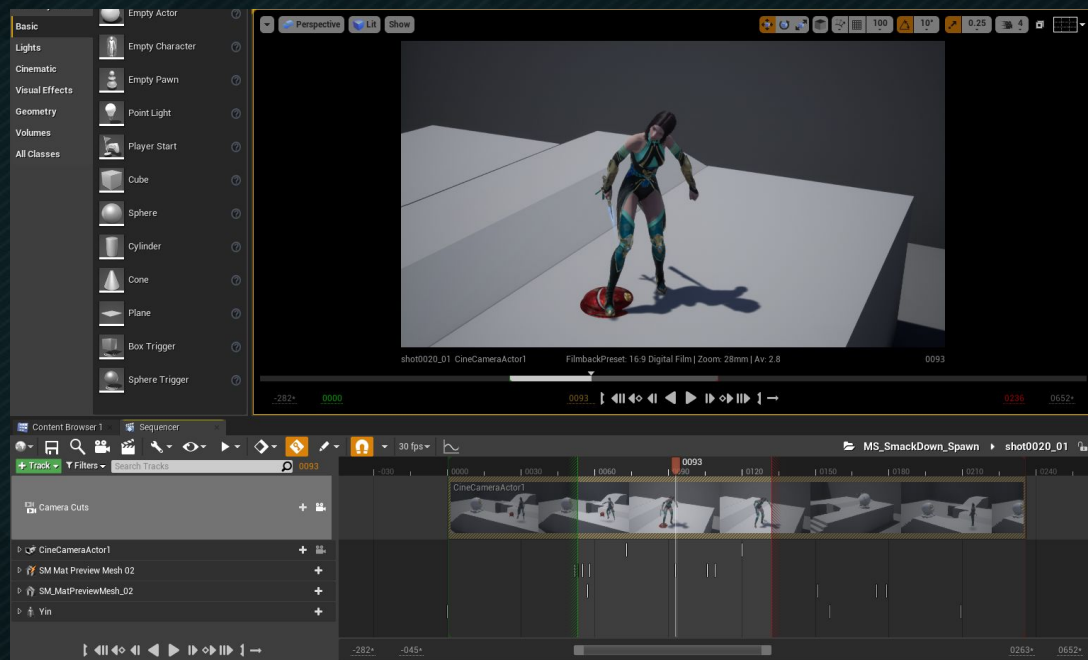# Sequencer:
Spawnables v. Possessables

Erica Penk

Teaser

Overview

- Teaser

- Level Sequence Review

- Creating Level Sequences + Implications

- Why Add Actors to the Scene First?

- Spawnables v. Possessables

- Practice

Level Sequence

- Is the "container" for your cinematic scene.

- Must exist before you can work in the Sequencer tab.

- Can be bound to a specific level.

  - AKA the sequence "knows" which level it is referencing.

  - (If so, currently opened level matters.)

- Can have many "Tracks" (similar to Adobe layers)

  - Can Add Camera Cuts, Actors, Subscenes, etc

  - Edit / Animate Properties over Time

https://docs.unrealengine.com/en-US/Engine/Sequencer/Overview/index.html
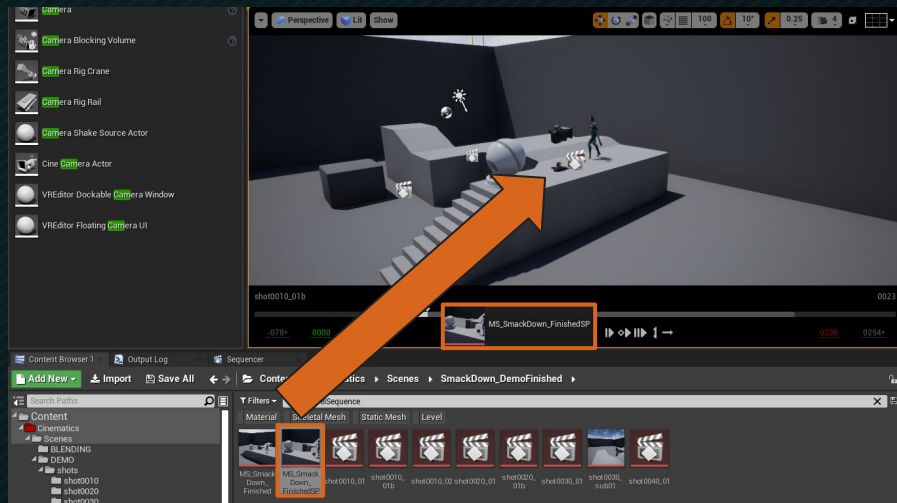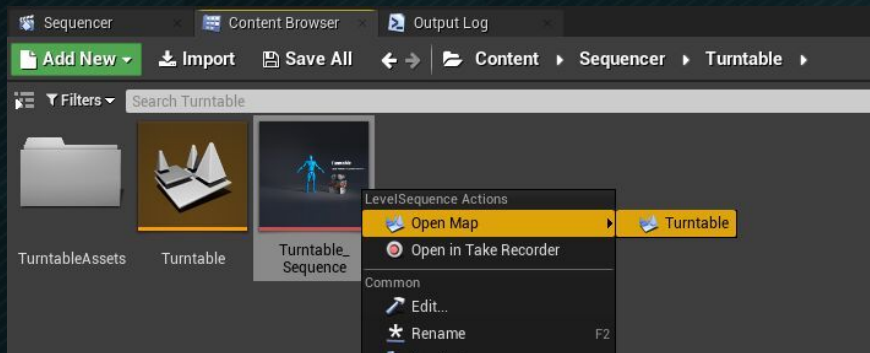
Create Level Sequence

(Unbound)

OR
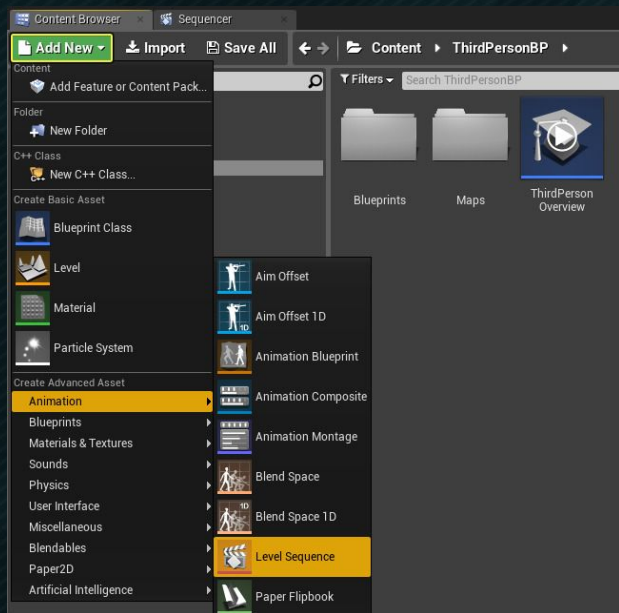
(Bound to Current Level)

Level Sequence Binding

- Right click on the Level Sequence to find out if it is bound to a level.

- If a map is not listed, you can drag the level sequence into the level.

- Binding updated after level save.

Add Actors to Scene First?

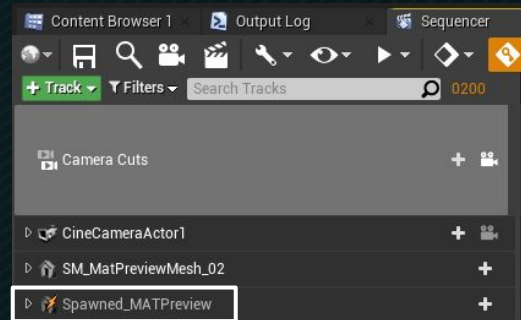- Tends to prevent unintentional creation of spawned actors

Possessables v. Spawnables

- ## Possessables

  - Are actors in a level that a sequence can "possess" and change.

  - Were used in the previous tutorial.

  - Don't exist in the sequence, they live in the level.

  - Require the correct level to be open to work properly in Sequencer.

- ## Spawnables

  - Are actors that do not exist in a level.

  - Live in the sequence and can be reused in multiple levels.

  - Have a "spawned" attribute that's keyframable.

 - Are "despawned" automatically when the sequence ends.

** Notice the added lightning bolt for the spawnable actor icon. **

https://docs.unrealengine.com/en-US/Engine/Sequencer/Overview/index.html
https://docs.unrealengine.com/en-US/Engine/Sequencer/HowTo/Spawnables/index.html
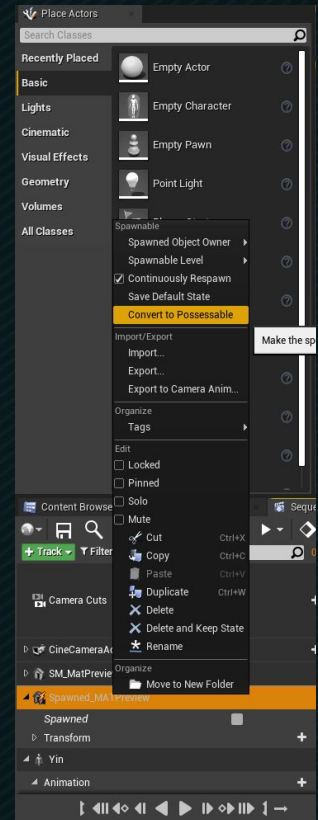
When To Use Spawnables?

- Actors that might / will be reused in multiple levels

- Actors that are created / destroyed in front of the camera

  - Explosions, ammo, prop interactions, etc

- Additional lights not already in the scene

  - A spawned character needs an extra light for its halo

  - A character temporarily needs more fill light

- Cameras (depending on your workflow)

  - Can find cameras by shot instead of by level

  - Can reuse fancy camera moves in other levels
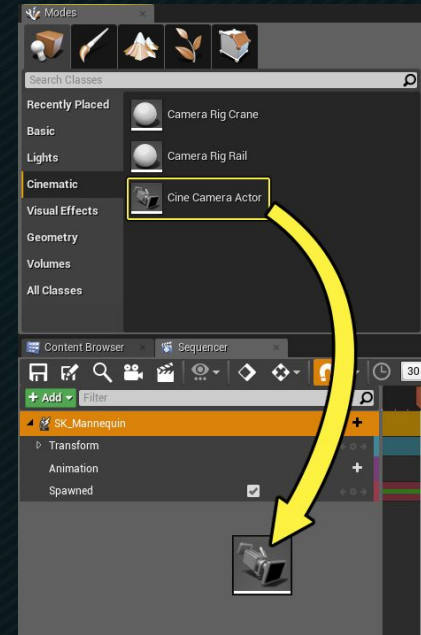
** Creates a spawnable Cine Camera Actor. **

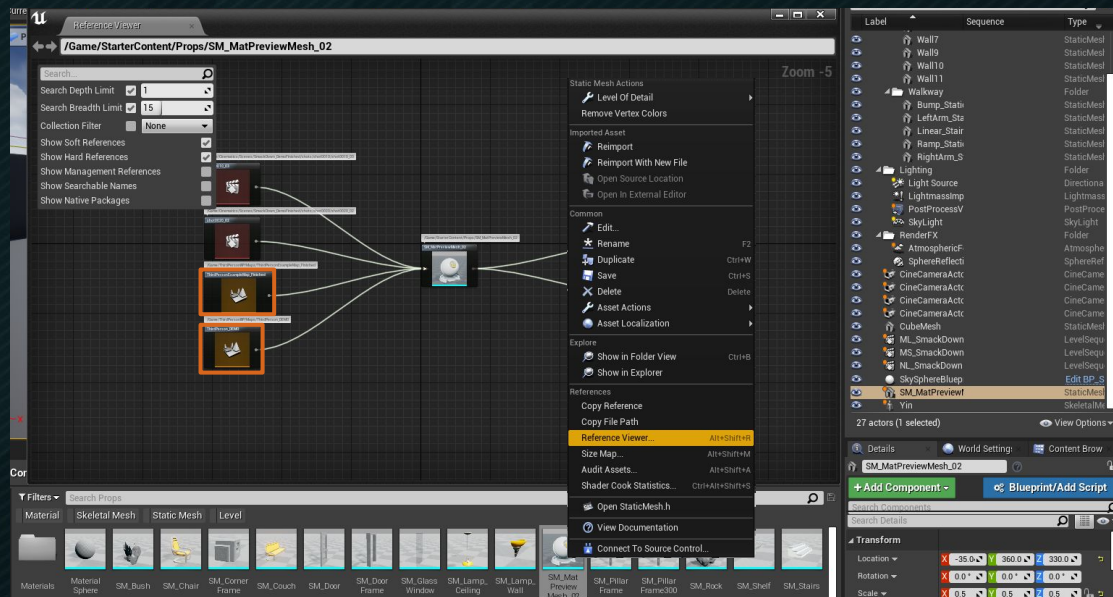https://docs.unrealengine.com/en-US/Engine/Sequencer/Overview/index.html

If you Change Your Mind...

- Convert Spawnable to Possessable

  - The Actor will be added to the current level.

  - Currently open level will matter again.

- Or Convert Possessable to Spawnable

  - Double check another sequence is not currently possessing that actor first!

    - Can reassign the actor to fix

  - The actor will no longer live in the level.

  - Lifetime of the actor controlled by Sequencer.

- If live recording to actors, double check recording settings.

https://answers.unrealengine.com/questions/591949/what-is-convert-to-possessable-in-the-sequencer-su.html

Asset Referencing

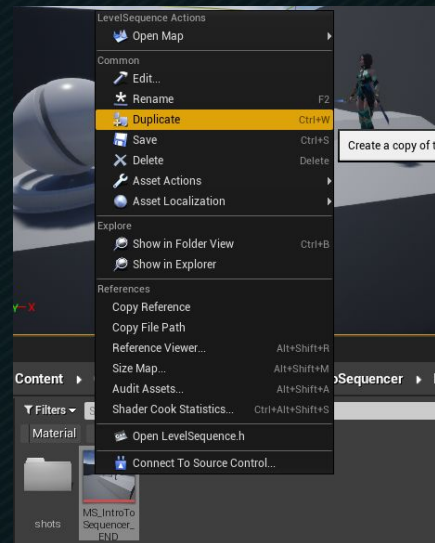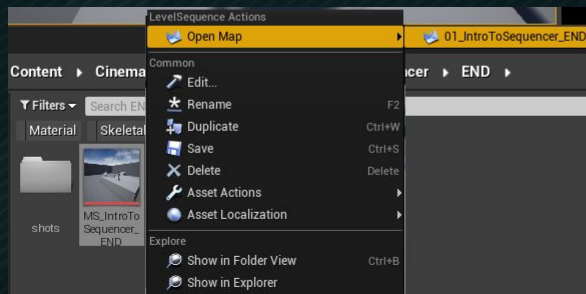- Fast way to check if an actor is referenced in more than one sequence.
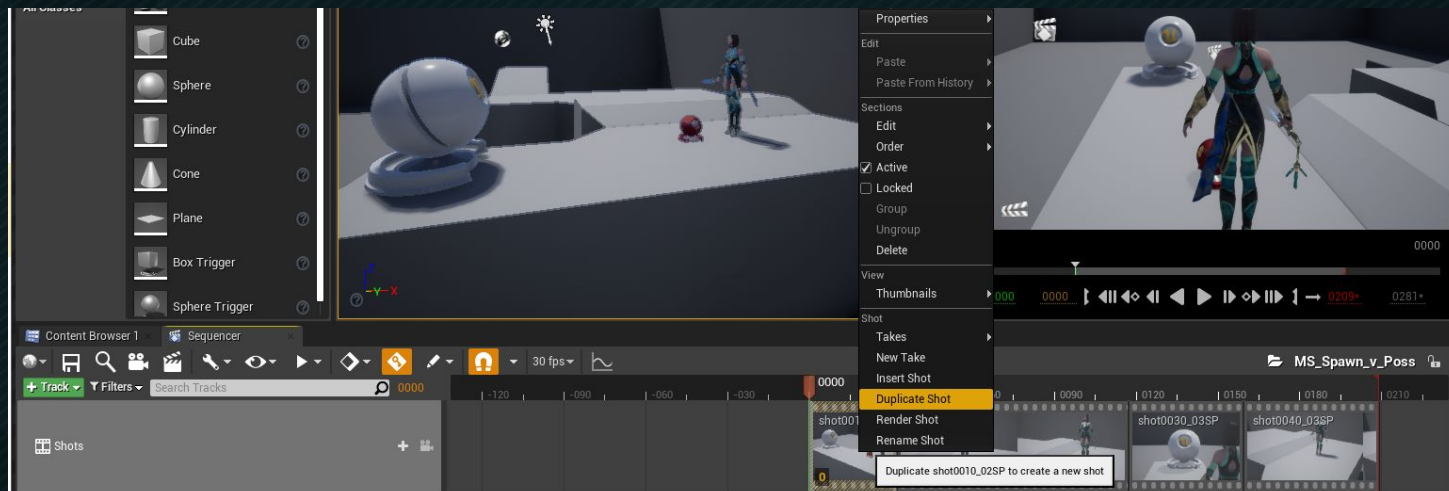
Practice

Now it's Your Turn!

Duplicate Previous Level Sequence

- The previous finished sequence was bound to a previous map.

- Duplicating a sequence does not retain the level binding.

- This sequence will be unbound.

Duplicate First Two Shots

- (If you don't want previous level sequence using those shots to change.)

- It's good to work iteratively.

Reassign Actors

- You can assign actors to current level to fix:
  - missing actors (red text)
  - animation that isn't coming through
  - converted spawnables used in other sequences
- (Anticipating your workflow and understanding spawnables will help too).
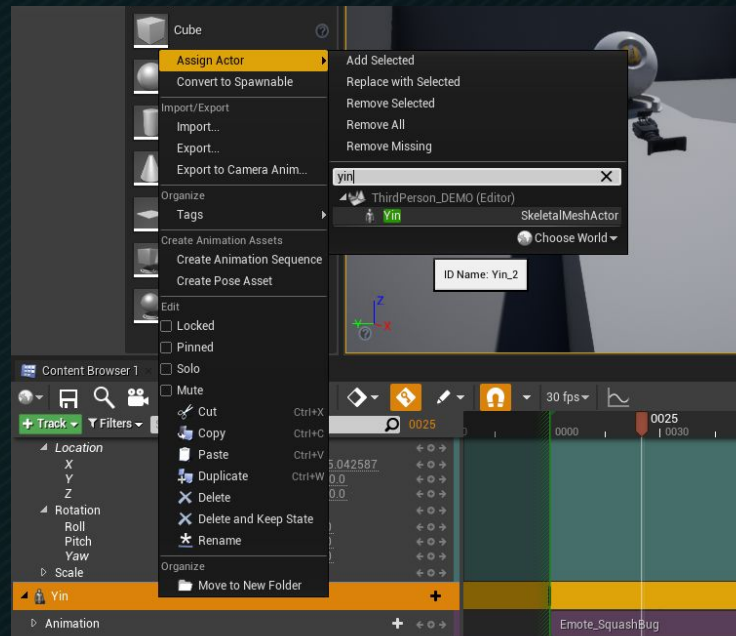
UI Setup for Adding Spawnables

● Adding a 2nd Content Browser helps you quickly drag and drop spawnable actors.
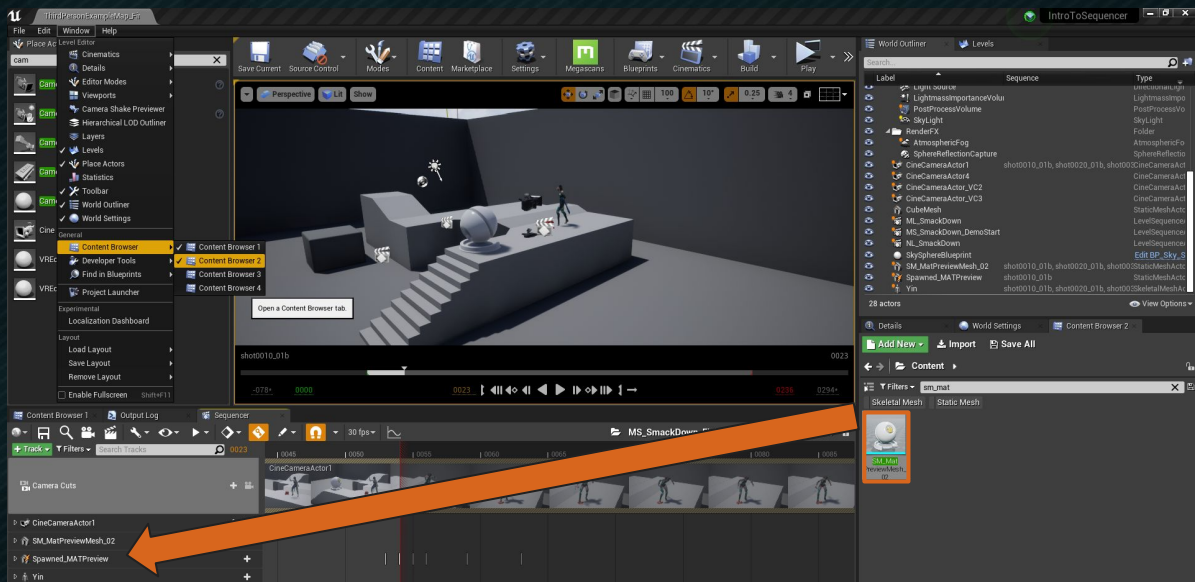
Workflow (Many Possibilities)

- Could add spawnable to the Master Sequence, edit shot timing, then copy spawnable to the individual shot sequences.

- Make sure Sequencer active when pasting.

- Delete spawnable from master sequence.

- Best to keep master sequence clean.

- But the sequence might be checked out

  - If using Source Control

 - (But you could create a subscene as a work around).
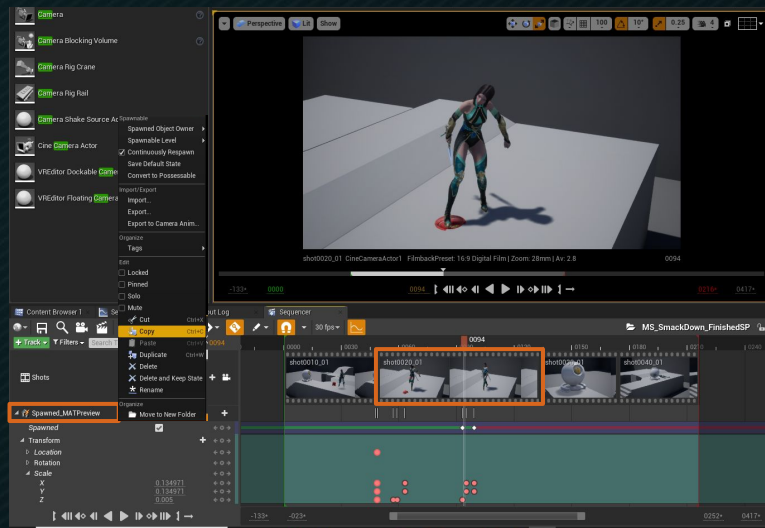
Workflow (NOT Exhaustive)

- OR you can add the spawnable directly to a shot.

- And copy it over.

- Regardless, be sure to use distinct names.

  - Sometimes material changes etc. don't transfer.

- If transforms don't transfer

  - Add at least one keyframe.

  - (Not usually a problem though.)
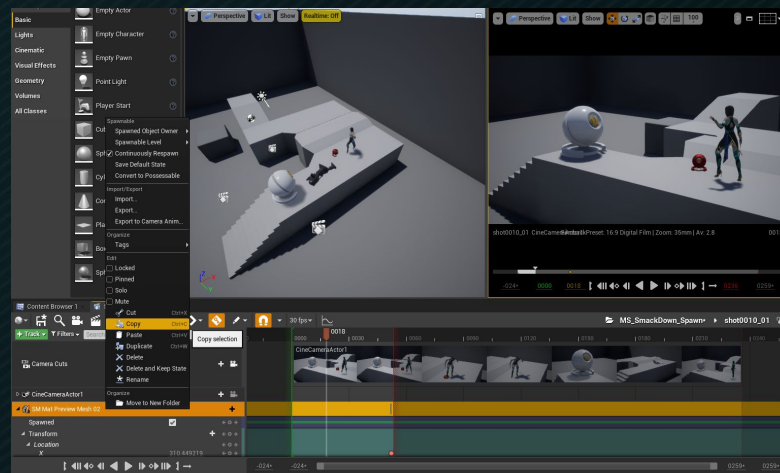
Sequence Curves

- Can break tangents, affect key interpolation, retime etc.
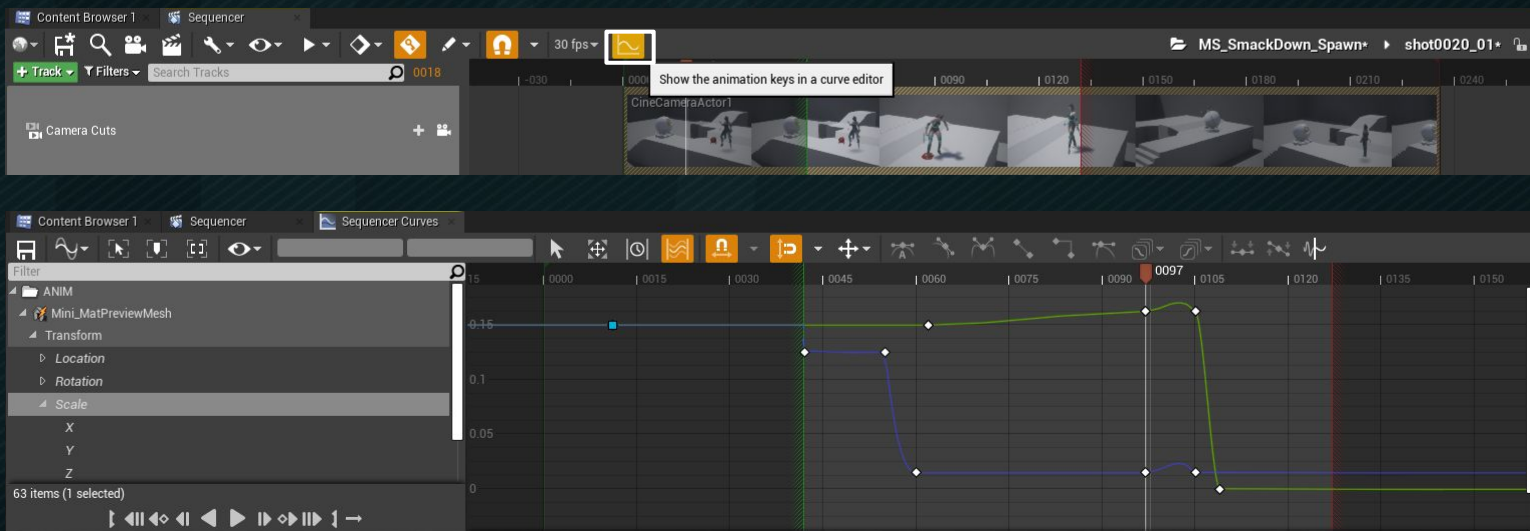
Sequencer Hotkeys

CTRL + MMB	Zoom	SPACEBAR	Toggle Playback
[,]	Set Playback Start / End to Current Time	G	Toggles Game View
, , .	Last / Next Keyframe	S	Sets Keyframe all Transforms
CTRL + G	Set Time / Frames	CTRL + L	Pilot / Eject Camera
← , →	Step Forward / Backward One Frame	CTRL + /	Cut Asset at Current Time
↓	Start Sequencer Play	CTRL + ,	Trim Asset Left of Current Time
↑	Set Playback Time to 0	CTRL + .	Trim Asset Rt. of Current Time
CTRL + ← , →	Shift Selected Keyframes One Frame	ALT + ⇧ + R	Reference Viewer

https://docs.unrealengine.com/en-US/Engine/Sequencer/Workflow/CheatSheet/index.html