

Overview

This is document for the early release of HairWorks UE4 integration.

Usage

A new component called Hair Component is added to hook up hair assets into Blueprints. To use a hair asset to a Blueprint, please follow these steps:

- Import hair assets into Content Browser.
 - Right click in the Content Browser, use Import to option to select one or more hair asset files, which are usually .apx or .apb exported from 3ds Max or Maya using HairWorks plugin.
- Open or create a Blueprint. In the Blueprint editor, create a Hair Component. Usually the hair component is attached under a skeletal mesh component.
- Assign an imported hair asset to the Asset/Hair property.
- Usually you want to click Asset/Load Parameters from Asset property to assign initial hair attributes.
- Now you can drag the blueprint to a level.
- Use properties in hair components to tune hairs.
- There are console variables beginning with r.Hair.Visual to control debug visualizer of HairWorks. Set them to 1 to activate.
- Check HairWorksDemo\Content\HairWorks\HairWorks.umap for a sample. Use [,] to switch assets. For other key setting, please check project setting and level Blueprint.

Known issues

- Only one directional light is supported
- Shadow may be of lower quality for certain assets compared to fur viewer/ideal solution (some MSAA related aliasing on shadows)
- Shadows may flicker
- Shadow attenuation for HairWorks assets not available.
- Temporal AA must be completely turned off for all the scenes.
- Color may not match between fur viewer and UE4 - users can tune the UE4 asset to match it, but no automated conversion yet. May be related to Gamma.
- We will revise workflow pipeline from blueprint based method. This may cause assets to break in future revisions.
- Unit scaling from HairWorks viewer assets to Ue4 may not be accurate in all cases.
 - Level of Detail distances may not be correct.
- HairWorks Visualizers are not available as UI items, only as console variables.
- RGBA selection for control textures is not available. Currently control textures are hardcoded to the red channel only.
- If RootFalloff alpha is set too high, a halo may exist around the graphics mesh at silhouette angles.
- Strand Controls along length are not implemented

- Per Strand texture
 - Strand Blend Mode
 - Strand Blend Scale
- HairWorks Import settings per asset are not implemented.
- HairWorks Asset is not directly editable. It is instanced into a blueprint.