

OVFP Naming Conventions

General Info

Naming conventions are a vital part of a virtual production project. They let the end user know useful information about the file they are opening, show relationships between different assets, empower scripts to automate parts of our workflow, and streamline the handoff procedure between different departments.

In UE4 our naming convention has the following general properties:

- all sections of a name are done in camelCase with no spaces, underscores or special characters.
- If a number needs to be added, use the format name0X to allow for multiple variations to be generated later
- A general format of {type}_{package/envName}_{assetName}_{extraInfo}
- The exact placement of the underscores is important for asset tracking and scripts
- Below are detailed naming conventions guides for each file type

Asset Sources

Part of the asset name denotes where that asset is sourced from for tracking purposes. This name often needs shortened and a cheatsheet for those names should be included in any VFX handover process.

By including the source of the asset files, a higher resolution version can be sourced later. It is also important for legal reasons.

source	Long Name	Link
MGS	Megascans	quixel megascans asset: https://quixel.com/megascans/home high quality photoscanned textures and objects
CC0	Creating common textures	www.cc0textures.com Free to use for any commercial purposes
Krono	Kronobits	www.kronobits.itch.io/matriax-free-cg-textures uses the CC0 license, free to use for any commercial purposes
texHaven	Texture haven	www.texturehaven.com uses the CC0 license, free to use for any commercial purposes
sharetex	Sharetextures	www.sharetextures.com uses the CC0 license, free to use for any commercial purposes
hdriSkies	HDRI Skies	www.texturehaven.com uses the CC0 license, free to use for any commercial purposes
3dmHaven	3d Model Haven	www.3dmodelhaven.com uses the CC0 license, free to use for any commercial purposes

Levels

Levels follow the general format of: {Level Type}_{levelName}_{extraInfo}_v{version number, 0XX}_suffix

Where the version level of the Master level and all sub levels are the same and are all contained in a folder with the name of the master level. See the folder structure document for further details.

Prefix	Long Name	Description
ML_	Master Level	A level used for the organization of the levels under it. Generally this level is kept empty
SL_	Sub Level	The general use sublevel. Anything but environment lighting can go here. Practical lighting such as a torch with a point light can. Generally this level does not include shot specific geometry or characters.
LSL_	Lighting Sub Level	Lighting for the overall look of the scene. Includes skylight directional lights, post process, skies, fog and any other lighting that is not practical (though if you need to turn it on and off in 2 looks, place it here)
ASL_	Animation Sub Level	All assets required for an animation not tied to shots. For example, a looping animation of cars driving on a street to give the feeling of traffic for a scouting session
ALQ_	Animation Sequence	The level sequencer asset tied to an AML
BSL_	Storyboard Sub Level	The characters, geo, lights and cameras related to a specific storyboard session. The extra info section of the name should contain the initials of the attendees as well as the date. eg. SBL_envName_200617FcKgTn_v002
MS_	Master Sequence	A master level sequencer asset tied used in the sequence animation workflow by previs and stage. See the animation documentation for more info

You can have as many sub levels in a scene as you want (I have used upwards of 60). They are useful for organization as you can quickly toggle visibility on all objects in a sub level. It also means one person can check out the geo sub-level while someone else has the lighting sub level checked out and both of their work will be saved.

Suffix	Long Name	Description
_rev	review version	A copy of the level organization for reviews. It allows for freedom to edit during the review without wiping out changes. Care should be taken to transfer the relevant notes to a new version. Takes recorder or multi user sessions can be used in conjunction with a review level to track changes more exactly.
_alt	alternate	designates that this level is intended to try out an idea and should not be considered the official design until merged into a non _alt version
_stg	stage	In a virtual production where UE4 is being used on stage, this is a copy optimized for the stage work. Only the stage prep team should work in this version.

Materials

Materials follow the general format of: {MaterialType}_{package/envName}_{materialName}
"materials" applied to objects in a UE4 scene should exclusively use material instances. A set of parent/master materials should be developed for the project and locked from being edited. See the materials section of the documentation for more information

Prefix	Long Name	Description
MM_	Master Material	What UE4 calls materials or parent materials. They operate like shaders in other programs and use node graphs. Generally you do not apply master materials to objects in a scene, instead use a material instance
MI_	Material Instance	UE4 calls them material instances. If your master material has parameters set up, the instance will show easy to use sliders and value inputs instead of a node graph. Using one master material and 10 material instances of it is significantly better performing than a full master material on each object
MLF_	Light Function Master Material	UE4 material for light functions (gobos, cookies)
LF_	Light Function Material Instance	UE4 material instance for light functions (gobos, cookies)
MF_	Material Function	A subset of a material graph used to organize and reuse code.
SSP_	Subsurface profile	A gradient color map for light scattering. Useful for Jade, skin and other sub-surface materials. Requires a material set up to use them.
DMM_	Decal Master Material	The material parent is a decal. It works like a 2d texture projector onto any surface and does not require an associated mesh
DMI_	Decal Material Instance	The material instance is a decal. It works like a 2d texture projector onto any surface and does not require an associated mesh
PPMI_	Post Process Material Instance	A material instance that is applied to a post process volume for various effects
PPMM_	Post Process Master Material	A master material used by PPMI for post process effects

Textures

Textures follow the general format of: TX_{package/envName}_{materialName}_{freewrite}_{Suffixcode} for example TX_CC0_metal06_pillarVar_col is a base color texture from cc0textures.com called metal 06, with a note by its creator that it was a variation made for a pillar.

Textures must be power of 2. Resolutions must be made of 512, 1024, 2048, 4096, 8192. Rectangular textures are fine so long as they are 1024*2048 or similar

Suffix	Texture Type	Description
_col	Base Color/Albedo/ Diffuse/etc	set to pack without alpha in UE
_orm	Ambient Occlusion, roughness, metallic packed into 1 texture file	set to linear color, no srgb, mask in UE
_nrm	Normal	set to world normal in UE
_opa	opacity (usually seperate from base color)	set to linear color, mask, no srgb, black and white in UE
_emi	emissive	
_msk	mask	
_rgh	roughness	
_ao	ambient occlusion	
_met	metallic	
_disp	displacement	
_hgt	heightmap	
_flm	flowmap	
_lmp	lightmap	
_imp	imperfection/noise	
_subc	subsurface color map	
_subi	subsurface intensity map	

OVFP Naming Conventions

Meshes

Meshes follow the general format of: {Mesh Type}_{package/envName}_{meshName}

Skeletal Meshes are built for animation and take more computer power to render. By default when you import meshes into UE4 they will come in as the lighter static mesh type unless you have added animation or a bone to them.

Naming Convention	Name	Description
SM_{package/envName}_{meshName}-{freewrite}	Static Mesh	A static mesh is a 3d object that can be moved/scaled/animated. Much simpler and lighter on the computer than skeletal meshes, but cannot be affected by bones or morph targets.
SK_{source}_{assetName}	Skeletal Mesh	A skeletal mesh is a 3d object that can do everything a static mesh can do, and also be animated by bones and morph targets. These are usually your characters, vehicles and animated props on a film.
SKA_{source}_{assetName}_{animationName}	Skeletal Mesh Animation	A baked animation for a particular skeletal mesh skeleton. If you animate in a 3rd party program, your animations will be imported as this format.
SKP_{source}_{assetName}_{physicsAssetVar}	Skeletal Mesh Physics Asset	Defines collision and other physics for a skeletal mesh. Useful if you are doing simulations in UE in real time.
SKS_{source}_{assetName}	Skeletal Mesh Skeleton	The bone hierarchy for a particular skeletal mesh. If two meshes use the same skeleton they can reuse animations between them. See the animation workflow documentation for more info.
ABP_{source}_{assetName}_{blueprintName}	Skeletal mesh animation blueprint	Animation blueprints are special bits of code that can drive a skeletal mesh's animation. Frequently used in live link, motion capture and posing addons for UE4.
AC_{source}_{assetName}_{compositeName}	Skeletal mesh animation composite	Animation Composite (not frequently used)
AM_{source}_{assetName}_{montageName}	Skeletal mesh animation montage	Animation Montage (not frequently used)
BS_{source}_{assetName}_{blendSpaceName}	Skeletal mesh blend space	Animation Blend Space (not frequently used)
MT_{source}_{assetName}_{morphTargetName}	Skeletal mesh morph target	Animation Morph Target (not frequently used)
PS_{source}_{assetName}_{poseName}	Skeletal mesh pose asset	Animation Pose Asset (not frequently used)
ASB_{package/envName}_{FbxName}	Assembly/Asset Batch	An assembly of meshes. This is a new filetype in the OVFP that can be used as a reference of how a file was imported. Similar to an FBX scene without the bugs found in that system.
ABH_{package/envName}_{FbxName}	Assembly/Asset Batch Hierarchy	The hierarchy of the assembly file. One of the files generated by the bridge tools between unreal and various 3d modeling programs.
ABM_{package/envName}_{FbxName}	Assembly/Asset Batch Mat CSV	The materials of the bridge import file. One of the files generated by the bridge tools between unreal and various 3d modeling programs and not typically touched by the user.
ABT_{package/envName}_{FbxName}	Assembly/Asset Batch Tex CSV	The textures of the bridge import file. One of the files generated by the bridge tools between unreal and various 3d modeling programs and not typically touched by the user.

Misc

Name	Naming Convention	Description
LUT	LUT_{package/envName}_{LUTname}_{freewrite}	Look up table, a type texture used in post processing that facilitates detail color grading
Thumbnail	TMB_{Asset Naming convention without the prefix}	A thumbnail image of an asset in UE4. Mostly useful for tools like the VR scouting suite
Camera	CAM_{brand}_{modelName}	A CSV file that has been imported into UE that contains lens/filmback information. Used by the storyboard camera to simulate real world cameras
Light	LGT_{source}_{name}	A blueprint containing geometry, code and light objects to replicate a real world stage fixture
IES file	IES_{source}_{name}_{iesName}	An image file that defines how a light source emits light. Used in the replication of real world sources/adding texture to a light
Particle Effect	PFX_{source}_{effectName}	Fire, explosions, dust and smoke are all particles effects in UE4.
Foliage Asset	FT_{source}_{name}	A file used by the landscape foliage painting tool that contains information on how that foliage asset should be applied
Landscape Grass	LG_{source}_{name}	A file used by the landscape grass tool that dictates how that particular foliage should be procedurally applied
Texture cube	TC_{source}_{skyname}	A HDRI file/cubemap file that is used by skylights in UE4 to provide a cheap general fill light. See the lighting documentation for more information
Blueprint	BP_	Blueprint asset. Code mixed with meshes, lights, etc.
Virtual Production Editor Utility	VPUI_	A tool with a user interface that provides a new function inside the editor, such as creating material instances from textures
Preview	PV_	Preview image (used outside of UE4 for sorting files)