The Ultimate Fast Guide for Maya and automated Workflow Procedures

Version 0.914. 8.12.2024

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The Ultimate Fast Workflow Production Guide

1.1 Fit For Wokflow

Load Scene Startup with Layout and Preferences

Set Project First

Use Naming Conventions

- Scene Names:
Production Step Prefixes, Enumeration and Task Post Fixes.
- Node Names, Maya Default and as Short as Possible:
"stringString" , "nameAttribute" . Namespace: name_Atrribute

Use the Directories

Use the Hotkeys and the AutoWF

Use the WF Lookups

Use the Guide

1. From Inside the Trax Editor.
Change Objects in the Scene.
In Trax, Click on the **"Key into Clip" Button or RMB on Clip, Key into Clip. Also Duplicated Clips will be changed.**
or
2. From Outside the Trax Editor.
RMB on Clip, Activate Keys (Clip is now purple) or Modify, Activate Keys (Activate/Deactivate Keys) .
Change objects of a Trax Clip in the scene, **select a Clip in Trax**, **where the objects are in**, and **key the objects**.
So the created Keys, now will automatically be placed in the Clip. Recommended for Placing many Keys.
Tip: In Trax, click on the Show Clip in GE Button.

Key Only into Animation Clips, having a Duration. Otherwise it may have undesirable Results.

You can Change or **Animate the Clip Weights by Keying them in the GE (Graph Editor)**.
Recommendation: In Trax, **RMB on Clip, Graph Weight. RMB, Create Weight Curve**.

Clip Operations:

On Clip, **RMB, Split Clip** (Splits in 2 Clips at Position.)
Or
Trim Before (Delete Clip before Position) .
Or
Trim After (Delete Clip after Position) .

When Animation (or new Animation Clip) In Trax is Finished,
Bake Simulation,
you can do Further Finetuning in Graph Editor.

Copy and Paste Clips between Characters:

Before this , the Characters must be Mapped.

Mapping Animation between Characters:
Character Mapper (in Character Rig Chapter) .
It creates a Correspondence between the Source and the Target characters nodes or attributes.
So the **Attributes of one Character are mapped or linked to the other Character**.
This creates a **characterMap node**,
which **stores the array of connections between the mapped nodes and the attributes**.

1.8 Fit For Rendering

Render Layer

Channel Box, Options
Select Layers to Render.

Master Layer
Non-Renderable by Default, if there is more than 1 Layer.

Render Layer
Select Blend Modes for Composite Beauty Image in Render View.

Overrides

In Scene
Object, Material Override.
Only Active, if in Render Settings "Use Override" .

On Layer
Channel Box (The Icons):
- Render Layer of Shading Groups
- Member Overrides (render stats in AE)
- Render Settings

Other Attibutes in AE .

Possible Render Tasks

1. Render Settings: Select Renderer, Settings.

2. Layer Overrides in AE : Turn off "Cast Shadows" etc. .

3. Material Assignments: Per Component, Per Object.

4. Apply Layer Presets.

5. Assign Layer Blend Modes, Preview Laye Comp. in Render View.

2.2 Nodes

Mayas **Dependency Graph (DG)** is based on Nodes.
It is actually, what Maya is made of.

Node Types:

Nodes process input data with their compute function, store it, and modify it, if required, and output it.
Nodes contain properties, commonly named as attributes.
e.g. a nurbsSphere can have a translateX attribute, a makenurbsSphere can have a radius attribute.
Data values are simply stored in the attributes and modified by the compute function, if required.
Every node has its own compute function.

Generic node:

Input ->
Compute Function
-> Output

Node:

Attribute input -> **Compute Function** -> Attribute output

Or:

Simple Data Repository Node (see Bottom) **:**

The Node does not compute anything, it just holds a value:

e.g.

A Time Node:

time -> outTime (time)

The Compute Function

The code of the compute function is hidden and not accsessible.
The compute function only looks at its own attributes to perform its task.
A node just uses its input and output attributes.
You control the node by changing its input values.
You can freely use a node as your custom node, modify it, or make it more efficient, or make it fit your needs.

Attributes

Internally, inside the node, the attribute has an input and an output.

3.3 Link Colors

Hypergraph, Hypershade

Connection line colors:

Default Color	Attribute Type	Example Attributes
Blue	Single	transform.translateX, makeNurbsSphere.radius
Cyan	Double	file.repeatUV, cameraShape.cameraAperature
Green	Triple	transform.translate, lambert.color
Magenta	Data	nurbsSurface.create, makeNurbsSphere.outputSurface
Red	Array	particleShape.position, particleShape.velocity

Channel Box

Colors:

State	Color
Locked	Gray
Nonkeyable	Light gray
Muted	Brown
Blended	Green
Keyed	Light Orange
Expression	Purple (HSB = 270,25,85)
Constrained	Blue
Connected	Yellow

Create 512x512 UV Snapshot or PSD Network, Paint Textures in Photoshop.
Import Textures back to Maya.

Animation

<<< Beginner's Level Tips - Start >>>

Basic Animation:

Select object to animate.
Set Key "s".
Move Timeslider.
Move or modify object.
Set Key "s".
Playback the Animation.

Or
use Autokey.
Press the Autokey Icon, it turns red.
Then do the same, without setting keys.
Playback the Animation.

<<< Beginner's Level Tips - End >>>

Rig:

Rigid Bind: Joint to Vertex Influence. Use Deformers to control shape.
Smooth Bind: Joint to Vertex Weight Influence. Use Paint Weights to control shape.

SCsolver : SingleChain Solver. Simplest IKsolver. Joints on a fixed plane. 1 degree of freedom. For 2 or 3 Joints.
RPsolver : RotatePlane Sover. Allows Rotation around the joint axis. 2 degrees of freedom. For 2 or 3 Joints.
SplineIKsolver: For Multiple Joints and 1 Curve. Move Vertices to vary the Spline.
SpringIKsolver: For Multiple Joints. Feather Jump.
HIKsolver: For Multpile Joints. Tentacle.

After Rigging and ikSetup, Set Preffered Angle. This will prevent wrong Rotations.
Set Transform Limits to limit Transformations to a natural space.

Try to animate not using a character set.
Position the ikHandles, **set the key for the selected ikHandle**.
Keys for shape or joints are not possible any more, because they are dependent on the ikHandles.
When having a splineIK Control or other **ControlCurves** or Locators **with the ikHandles parented** to them,
then you MUST **select BOTH** at once,
the ControlCurve and the dependent ikHandle to **set a key for them**, This is the only way it works.

Note:
IK works only with IKFK Keys, not with Normal Keys.

When finished, select all ikHandles, go to Trax Editor, Create Animation Clip.
A new Character Set is created.
In Trax Editor, click Create Clip, and the clip appears.