

# DSLscripts

- What is DSLscripts?

DSLscripts is the compilation of scripts for 3ds max, based around various personal tools that have developed over the years working with 3ds max.

- Who is DSLscripts created for?

DSLscripts is mainly created to simplify, automate and speed up the things many 3ds max users do everyday. But it also provides tools for specific, otherwise time consuming situations.

- More info found on:

Demo videos: <https://vimeo.com/showcase/6892929>

Facebook: <https://www.facebook.com/DSLscripts>

Document updated 04-08-2021

- What does DSLscripts contain, and what can it do?

DSLscripts is currently separated in the following 12 categories:

- [Arrange](#)

Tools that arrange, position or pack objects in various ways.

- [Camera](#)

Tools that affect or create camera related objects and features.

- [Display](#)

Tools that affect display in viewport, such as improved hiding of classes, ect.

- [Duplicate](#)

Tools that copy, clone, instance and replace objects.

- [Geometry](#)

Tools that manipulates geometry, UVs, ect.

- [Floater Tools](#)

A number of similar tools that allow quick assignment of wireframe color, vertex color, or material color.

- [Linking](#)

Tools that create or manipulate object links.

- [Material](#)

Tools that help assign and manage materials.

- [MaxSystem](#)

Tools that perform specific tasks related to 3ds max system.

- [Modifier](#)

Tools that assist modifier creation and gizmo manipulation.

- [SceneData](#)

Tools that collect or manipulate various scene data.

- [Selection](#)

Tools that create or manipulate object selection.

- [ShellOps](#)

Tools that perform tasks by interacting with Windows Explorer.



















- [Time](#)

Tools that assist in keyframe creation, manipulation, and time navigation.













- [Transform](#)

Tools that deal with object transforms, grid and measurement.











## - Arrange

-  **Distribute On Spline:**  
Quickly distribute clones along spline objects.
-  **Instance Quick Place:**  
Quick Place new Instances of selected objects.
-  **Interpolate Rotation:**  
Gradually rotate objects based on the orientation of first and last selected objects.
-  **Project To Scene:**  
Project nodes or sub-object components to Scene Geometry based on flat or perspective views.
-  **Snap To Grid:**  
Snaps selected objects to the nearest Grid Point.
-  **Pack Objects Linear:**  
Linear packing of objects.
-  **Quick Distribute Linear:**  
Distribute objects evenly between the first and last selection.
-  **Quick Place:**  
Similar to 3ds max native "Select and Place", but without the need to click and drag the object you wish to affect.
-  **Radial Array:**  
Quickly create radial (360) arrays around a node. Set radius by picked distance, parameter or interactive sliding.
-  **Spread Positions Tool:**  
Spread positions relative to a specific center point.
-  **Helper From SubObject:**  
Creates Points or Dummies based on geometry subselections.
-  **Flipbook Texture Creator:**  
Generate flipbook textures from image sequences.
-  **Place on Plane:**  
Place objects on a plane defined by three picked points.
-  **Average Positions:**  
Averages positions of several objects on selected axis.
-  **Path Constraint Distribute:**  
Distributes Path Constrained objects evenly along the spline.
-  **Put To Floor:**  
Positions objects so that the lowest point on the object is places on the geometry found below, or the world grid.
-  **Quick PhysX:**  
Automatically simulates physics on selected objects.
-  **Quick PhysX Make Static:**  
Makes objects static mesh colliders.










## - Display

-  **Cross Toggle Layers:**  
A tool for easy toggling the visibility between two layers.
-  **Toggle IK Goals:**  
Toggle visibility of scene IK goals.
-  **Hide Category Toggle:**  
A series of scripts that provide the same functionality as 3ds max's "Hide By Category" with the expanded functionality of solo display selected category by holding ALT. Holding ALT when all other categories are hidden will display all categories again.
-  **Random Wireframe Color:**  
Will individually randomize wireframe color for a selected objects.
-  **Random Wireframe Color Group:**  
Will give all selected objects the same randomized wireframe color.
-  **Unhide Selected:**  
Unhides the selected objects.
-  **Isolate Layer Siblings:**  
Isolates all Objects assigned to the same Layers as the selected objects. Custom Isolate command can be used.
-  **Toggle Spline Visibility:**  
Toggles the Enable In Render/View in the baseObject of selected Shapes. Disables/Enables any modifiers if present.
-  **High Quality / Default Shading:**  
Quick preset button for viewport display mode.
-  **Standard / Default Shading:**  
Quick preset button for viewport display mode.
-  **Standard / Flat Color:**  
Quick preset button for viewport display mode.
-  **Performance / Default Shading:**  
Quick preset button for viewport display mode.




## - Camera

-  **Create Camera Plane:**  
Creates a dynamic camera plane for camera objects.
-  **Camera FOV by Distance:**  
Lets you pick two points in the scene, and that distance becomes the FOV of the current camera object.
-  **Lock All Cameras:**  
Locks the transform of all camera objects in scene.
-  **Lock/Unlock Viewport Camera:**  
Locks/Unlocks the transform of current active viewport camera.
-  **Make Camera Vertigo:**  
Sets up cameras so that they preserve FOV while camera is moved, creating a "vertigo effect" in view.
-  **Pick Focus Distance:**  
Lets you set camera focus distance by clicking a point in the scene.
-  **Select Viewport Camera:**  
Selects the active viewport camera.
-  **Select Target Distance:**  
Lets you set camera target distance by clicking a point in the scene.
-  **Move By Target Distance:**  
Moves the Camera back by the length of the Target Distance.
-  **Pick Target Distance:**  
Sets the Target Distance to be at the same length as the virtual plane of a picked point in the scene.

## - Duplicate

-  **Make Instance Of:**  
Selected Objects will become Instances of the Picked Object.
-  **Make Reference Of:**  
Selected Objects will become References of the Picked Object.
-  **Quick Copy:**  
Makes copies of Selected Objects without any prompt.
-  **Quick Instance:**  
Makes Instances of Selected Objects without any prompt.
-  **Replace Sources With Target:**  
Selected objects will be replaced by the picked target object.
-  **Replace Target With Source:**  
Replaces the picked target object with the selected object.
-  **Duplicate Sources and Align At Target:**  
Selected objects will be duplicated and aligned (transform matched) to the picked target object.
-  **Duplicate Sources And Position At Target:**  
Like previous tool, except only position is matched.
-  **Duplicate Target And Position At Sources:**  
Like previous tool, except Target and Source is swapped.

## - Floater Tools

-  **Floater Tool - Diffuse:**  
Provides a palette for quickly assigning materials and diffuse colors to selected objects.
-  **Floater Tool - Vertex:**  
Provides a palette for quickly assigning vertex data values to Editable Poly / Mesh objects.
-  **Floater Tool - Wire:**  
Provides a palette for quickly assigning object wire colors.

## - Geometry



### **Align UV Rings Horizontal:**

Based on one Selected UV Edge, aligns all connected UV rings horizontally.



### **Align UV Rings Vertical:**

Based on one Selected UV Edge, aligns all connected UV rings vertically.



### **Auto Smooth Element:**

Smooth the normals on all elements connected to the selected elements (vertex, edge, face).



### **Chipping Tool:**

Applies damage to corners and surfaces of geometry objects.



### **Clamp Vertex Position:**

Clamps the Position of Vertices below or above a specified value. Works both in World and Local space.



### **Create Uniform Cube:**

Creates a Cube primitive that is always uniform in size.



### **Collapse To Target:**

Collapses all selected Vertices to the specified target Vertex.



### **Copy UV Bounding Box:**

In the UVW Unwrap editor, copies the bounding box coordinates of selected elements to the clipboard (to be used with Paste UV Bounding Box).



### **Paste UV Bounding Box:**

In the UVW Unwrap editor, fits the current selected elements inside the bounding box copied by Copy UV Bounding Box.



### **Copy UV Position:**

In the UVW Unwrap editor, copies the center position of selected elements to the clipboard (to be used by UV Paste X and Y).



### **Paste UV Position X:**

In the UVW Unwrap editor, positions selected elements using the copied X coordinate.



### **Paste UV Position Y:**

In the UVW Unwrap editor, positions selected elements using the copied Y coordinate.



### **Copy/Paste Vertex Position:**

Provides a quick menu for aligning Vertices according to the position of other Vertices.



### **Create Boundingbox:**

Creates a Box Primitive encompassing the bounding box of respective Selected Objects, or a Group of Selected Objects.



### **Cut Mesh Tool:**

A tool for quickly Cutting Up Meshes such as terrains for game engines, into smaller, individual Objects.



### **Flow Connect:**

A shortcut to apply Flow Connect only on selected edges.



### **Fuse Nearby UVs tool:**

A tool to assist with synchronising UV vertex positions across UV shells.



### **Fuse UVs:**

Fuses the position of all Selected UV Elements to the Center of the Selection.



### **Get Substance UV Transformation:**

Prints out the Substance Transformation values corresponding to the bounding box of Selected UV elements.



### **Grid Spline Insert:**

Insert and extend Splines using an automatic Grid assistant.



### **Insert Corner Knots:**

Inserts Spline Knots at a specified distance around selected Knots.



### **Make Planar Individual:**

Applies a "Make Planar" individually on all selected Faces.



### **Match Shape UV Tiling:**

Matches UV Tiling between Shapes of different length.



### **Paste UV Shells:**

Individually "Paste" UV Shells in the UVW Unwrap editor.



### **Plane Uniform Segments:**

Create/set Plane primitives to automatically maintain square aspect segmentation.



### **Plane Uniform Size:**

Create/set Plane primitive that is always square.



### **Quadrify Selection:**

Applies "Quadrify" on selected Objects or Sub-objects.



### **Quick Snapshot:**

Creates an editable mesh copy of all selected geometry class objects without any dialog window.



### **Random Extrude:**

Individually extrudes selected Faces randomly within specified range.



### **Cut Mesh Tool:**

Tool for automatic segmenting of large complex meshes, such as terrain meshes to be used in game engines.



### **Scale UVs:**

Individually extrudes selected Faces randomly within specified range.



### **Select Only One UV Element:**

Only selects one UV element in selection.



### **Set MatID By String:**

If Object has Multi/Sub material, searches and applies the corresponding Material ID on selected faces if name is found.



### **Spline From Edge Rings:**

Used to construct Splines from mesh Edge Rings.



### **Spline From Positions:**

Constructs a spline based on the position of selected Objects.



### **Spline Tangent Tool:**

Tool for manipulating Spline Tangents with precision.



### **Symmetry World:**

Applies a Symmetry Modifier to Selected Objects, puts the Modifier Gizmo at the specified World Axis, and Aligns the Gizmo to the World.



### **Transfer UV Channels From:**

Quickly transfers UV channels between Objects.



### **Unhide All Elements:**

In Editable/Edit Poly, unhides all hidden elements (vertex, face) at once, as opposed to just vertices or faces depending on sub object level.



### **UV Pixel Snap:**











Snap position of UV Vertices to virtual pixels coordinates.




















### **UV Smart Stitch:**

Stitches the smallest UV element to the larger using selected Edge.


























## - Linking

-  **Chain Link Selection:**  
Link objects in selection order, where first object is linked to the second, and so on.
-  **Create Helper And Link:**  
Creates Helpers at selected Objects and links the Objects to the Helpers.
-  **Disable Show Links:**  
Shown links between objects will be hidden.
-  **Disable Show Links Only:**  
Turns off the Show Links Only mode.
-  **Enable Show Links:**  
Links between objects are shown in the viewport.
-  **Enable Show Links Only:**  
Only the links are shown (not the object/mesh).
-  **Fix Bone Size:**  
Bone sizes are automatically set to an appropriate value based on bone lengths.
-  **Fix End Bone Length:**  
Automatically set appropriate lengths to end bones based on end bone size.
-  **Parent To Last Selection:**  
Selected objects are linked to the last selected objects, similar to Maya's parenting workflow.
-  **Refine Link:**  
Splices a specified amount of clones into links, maintaining the hierarchical structure.












## - MaxSystem

-  **Clear Listener:**  
Clears the 3ds max Listener output.
-  **Clear Memory:**  
Provides a menu to clear various aspects of 3ds max memory system.
-  **Disable Modifier Panel:**  
Disables the Modifier Panel (the Stack) from updating.
-  **Enable Modifier Panel:**  
Enable the Modifier Panel to update.
-  **Execute From Clipboard:**  
Tries to 'execute' any Text Data currently in the Clipboard.
-  **Open From Scene Folder:**  
Opens the 'Open File' dialogue window always showing the Project Scene Folder by default.
-  **Save In Scene Folder:**  
Opens the 'Save File' dialogue window always showing the Project Scene Folder by default.
-  **Ratio Calculator:**  
Provides a specialized calculator for easy calculation of ratios between values.
-  **Re-Init Icons:**  
3ds max icon library is re-initialized, updates icons without restart.
-  **Show Current Modifier Class:**  
Prints the class of the current active Modifier in the Stack.
-  **Show Current Modifier Properties:**  
Prints the properties of the current active Modifier (helpful when doing Maxscript).
-  **Show Material Class:**  
Prints the class of the Material/Map in the current active material slot or Slate selection.
-  **Show Material Properties:**  
Prints the properties of the Material/Map in the current active material slot or Slate selection.
-  **Show Object Class:**  
Prints the class of the current selected Objects.
-  **Show Object Properties:**  
Prints the properties of the current selected Objects.
-  **List SubAnims:**  
A tool for Printing out a Visual Representation of the SubAnim hierarchy of Selected Objects.
-  **Snap To:**  
Provides the same functionality as 3ds max's native Snap To with the expanded functionality of solo snap selection by pressing ALT when making the selection in the menu.

## - Material

-  **Assign Active Slot:**  
Assigns the current active Material Editor slot to the selected objects.
-  **Condense Scene Materials:**  
Merges unique materials with identical name into one instance, including Multi/Sub materials.
-  **Crop Bitmap Tool:**  
Batch crop Bitmaps based on various forms of input coordinates.
-  **Distribute Multi/Sub Colors:**  
Distributes color with maximum hue diversity between all Multi/Sub materials.
-  **Flip Gradient Ramp:**  
Flips the direction of the classic Gradient Ramp.
-  **Space Gradient Ramp Flags:**  
Distributes the flags of the classic Gradient Ramp evenly.
-  **Load Material From File:**  
Quickly load .mat files and populate Material Editor or Slate.
-  **Save Material To File:**  
Quickly save selected materials and maps to .mat files. Works in both Material Editor and Slate.
-  **Make Shell Material:**  
Automatically creates a Shell Material of the Current Active Material Editor Slot.
-  **Material Editor Slot Resetter:**  
A simple editor for resetting all or individual slots with a range of basic materials.
-  **Material Library Browser:**  
A browser that loads all Materials from the Material Library into a list with thumbnails for easy material assignment.
-  **Material Library From Bitmaps:**  
Generates Material Libraries from bitmaps that can be saved to file or Multi/Sub Material.
-  **Material XML Tool:**  
A tool for mass-assigning materials based on geometry profiles ([Example Video](#)).
-  **Multi/Sub From MatIDs:**  
Creates and Assigns a Multi/Sub Material to the Selected Objects, with the corresponding number of Material IDs and with distributed colors.
-  **Multi/Sub Names To Sub Mat Names:**  
The Names specified in the Multi/Sub Material will be assigned to the Name of each Sub Material.
-  **Sub Mat Names To Multi/Sub Names:**  
Each Multi/Sub Name will be assigned from the Name of each Sub Material.
-  **Propagate Material To Instances:**  
Distributes the material of selected Object to the object's instances.
-  **Quick Assign Material:**  
Input a name and a specified material type will be assigned to selected objects.
-  **Quick Create MultiSub:**  
In the Material Editor, assigns an empty Multi/Sub material containing just two sub-materials to the current slot.
-  **Quick Create VrayLightMtl:**  
Assigns a VrayLightMtl to the active Material Editor slot.
-  **Quick Create VrayMtl:**  
Assigns a VrayMtl to the active Material Editor slot.
-  **Remove Material Assignment:**  
Removes material assignment from selected objects.
-  **Remove All Materials From Scene:**  
Removes all material assignments on all objects in the scene.
-  **Search MatID By String:**  
Searches Material names within Multi/Sub materials and returns the Index of matched names.
-  **Clear Material Library:**  
Empties the current material library.

## - Modifier

-  **Align Gizmo To World:**  
Aligns the gizmo of the current modifier to world.
-  **Delete Top Modifier:**  
Deletes the modifier highest in the Stack on all selected objects.
-  **Disable/Enable Top Modifier:**  
Disables or Enables the modifier highest in the Stack on all selected objects.
-  **Link Modifier Gizmo To Object:**  
Link modifier gizmos to external objects. Primitives can also substitute as gizmo control.
-  **List Skin Bones:**  
Prints the bone order to the Listener.
-  **Quick Skin:**  
Quickly assigns the selected Objects as Bones to the last selected Object.
-  **Remove Modifiers By Class:**  
Delete all Modifiers in the scene by entering modifier class.
-  **Reset Modifier Gizmo:**  
Resets Modifier Gizmos to their default transform, including option to reset Gizmo Center independently.
-  **Setup Noise Modifiers:**  
Applies three linked Noise modifiers with unique seed per axis to selected Objects. This setup prevents noise bias.
-  **Skin Bone Selector:**  
Provides an expandable list displaying all Bones bound to a Skin modifier.
-  **UVW Map Region Fit:**  
My own version of the native "Region Fit", works more intuitively and supports viewport snapping.

## - SceneData



### **Bones From Positions:**

Creates a Bone structure based on the positions and order of the selected Objects.



### **Bones From Spline:**

Creates a Bone structure based on the path of a selected Spline.



### **Convert Centimeters To Meters:**

Converts the scene units from Centimeters to Meters by rescaling the scene, the grid and the view.



### **Convert Inches To Centimeters:**

Converts the scene units from Inches to Centimeters by rescaling the scene, the grid and the view.



### **Convert Meters To Centimeters:**

Converts the scene units from Meters to Centimeters by rescaling the scene, the grid and the view.



### **Copy Object Name:**

Copy the names of currently selected objects to the clipboard as text.



### **Copy Scene Name:**

Copy the name of the current scene to the clipboard.



### **Copy Scene Path:**

Copy the scene path of the current scene to the clipboard.



### **Create Layer Properties Object:**

Creates a Helper object for storing Layer data to be used in conjunction with the State Sets From Layers tool.



### **Create Helper(s) At Selection:**

Creates Helper objects at selected Objects.



### **Dummy Resizer:**

Smart sizing of Dummy objects.



### **Export From Root Layer:**

Selects and Exports all Objects nested under the same root Layer.



### **Export Selected World Center:**

Exports all selected Objects offset with the selection center placed in the center of the world.



### **Export From Selection Sets:**

Exports all Objects assigned to specific Selection Sets.



### **Export From State Sets:**

Exports all Objects visible under specific State Sets.



### **Get Shape Length:**

Prints the length of selected Spline objects.



### **Grow Spline From SubSelection:**

Creates a straight Line object from the normal of selected Polygons.



### **Current Layer From Selection:**

Makes the layer of selected objects current.



### **Move To Current Layer:**

Moves selected objects to the current layer.



### **Set Default Layer:**

Set the current layer to 0 (default).



### **Show/Hide Current Layer:**

Toggles the current layer on and off.



### **List Selection Hierarchy:**

Prints a visual representation of the Link Hierarchy of the Selected Objects.



### **Make Objects Unique:**

Makes all Selected Instances Unique.



### **Make Objects Unique Group:**

Makes Selected Instances Unique as a Group.



### **Match Layer:**

Moves the selected objects to the same layer as the picked object.



### **Match Material And Wireframe:**

Assigns to selected objects the same material assignment and wireframe color as the picked object.



### **Match Object Properties:**

For selected Objects, properties are transferred from a target Object if identical class.



### **Material Assignment Monitor:**

A small monitor tool that displays the name of currently selected Object.



### **Measure Points Distance:**

Displays a dynamic line and distance value between two picked points in the scene.



### **Propagate User Properties:**

Copies User Properties of selected Object to all instances.



### **Quick Rename Objects:**

A tool for quick intelligent renaming of objects, with proper non-conflicting numbering.



### **Remove Baked Elements:**

Removes all Render-To-Texture properties in selected Objects.



### **Remove Custom Attributes:**

Deletes all Custom Attributes on selected objects.



### **Rename Objects By Layer Name:**

Renames selected Objects based on the assigned Layer name.



### **Render Aspect By Picked Ratio:**

Set Render Aspect based on the Distance Ratio between two Picked Vectors.



### **Render Resolution \* 2:**

Doubles the Render Resolution size.



### **Render Resolution / 2:**

Halves the Render Resolution size.



### **Set Output Resolution:**

Provides a quick window to set Render Resolution.



### **Set Render Output Path:**

Provides a quick window to set Render Output Path.



### **Set Render Range:**

Provides a quick window to set Render Range.



### **Set Text String:**

Quickly set the text for Text or Textplus objects.



### **Size PhoenixFD Sim To Object:**

Automaticallt sizes PhoenixFD simulation grids to specified Object.



### **State Sets From Layers:**

Generates State Sets from selected Layers.



### **Toggle All Render Properties:**

Toggles all Render Related Properties of Selected Objects.

## - Selection



**Select Box Mode:**  
Select all Objects displayed in Box Mode.



**Select By String:**  
Provides a quick window for selecting Object by name matching exact strings or wildcards.



**Select Double Geometry:**  
A tool to identify scene objects with identical geometry existing in the exact same place.



**Select Instanced Objects:**  
Select all objects that are instanced, or only select instances of currently selected object.



**Select Intersecting Simple:**  
Selects overlapping Objects using a simple Boundingbox Intersection method.



**Select Layer Siblings:**  
Selects all Objects nested under the same layer, or root layer as the initial selection.



**Select Nth Object:**  
Refine selection by selecting every Nth object.



**Select Same Class:**  
Selects all Objects belonging to the same Class as the Selected Objects.



**Select Same Material:**  
Select all objects sharing the same material instance.



**Select Same Material Name:**  
Select all objects sharing materials with the same name (materials don't need to be instances).



**Select Same Object Name:**  
Select objects sharing the same naming pattern as selected object.



**Select Same Wirecolor:**  
Select objects sharing same wireframe color.



**Select Scaled Objects:**  
Selects All Objects where the Scale Part of the Transform is not equal to 1.



**Select Targets:**  
Select object targets, regardless of object type.



**Select Topmost:**  
When an object in a hierarchy is selected, selects the top-most object of that hierarchy. If multiple objects are selected, selection result is limited to that initial selection.



**Selection Filters:**  
Exposes SetSelectFilter so that selection filter can be set via shortcuts, menus, ect.



**Sort By BBox Size:**  
Selection order is sorted by Object size.



**Sort Selection By Name:**  
Selection order is sorted alphabetically.



**Sort Selection By Node Handle:**  
Selection order is sorted by the index of Object node handle, which is essentially the creation order.



**Sort Selection By Position:**  
Selection order is sorted by position relative to the specified world axis.



**Convert To:**  
Exposes EPoly\_Convert so that converting between selection types can be made via shortcuts, menus, ect.

## - ShellOps



**Open Max ENU Folder:**  
Opens the ENU folder in Windows Explorer.



**Open Max Root Folder:**  
Opens 3ds max root folder in Windows Explorer.



**Open Preview Folder:**  
Opens the current project Preview Folder in Windows Explorer.



**Open Project Export Folder:**  
Opens the current Project Export folder in Windows Explorer.



**Open Project Import Folder:**  
Opens the current Project Import folder in Windows Explorer.



**Open Project Folder:**  
Opens the current Project Folder in Windows Explorer.



**Open Project Image Folder:**  
Opens the Images (normally sceneassets/images) folder in Windows Explorer.



**Open Render Output Folder:**  
Opens render output file path or render output folder in Windows Explorer, or with specified external viewing/editing tool.



**Open Scene Folder:**  
Opens the folder of current open Scene File in Windows Explorer.

## - Time



### Align Center Keys To TimeSlider:

Align the center of track keyframes or selected keyframes to the time slider.



### Align First Key To TimeSlider:

Align the first keyframe in track or in selected keyframes to the time slider.



### Align Last Key To TimeSlider:

Align the last keyframe in track or in selected keyframes to the time slider.



### Animation Range From Selected Keys:

Sets the Animation Range based on the first and last selected Keyframes in Track View.



### Animation Range End From Selected Keys:

Sets the Animation Range based on the last selected Keyframe in Track View.



### Animation Range Start From Selected Keys:

Sets the Animation Range based on the first selected Keyframe in Track View.



### Change Tangent Type:

Changes the Tangent Type of All Keyframes found within Selected Objects.



### Clamp Keys Tool:

Clamp keyframe values within a specified range.



### Copy Time Range:

Copy scene Time Range to clipboard.



### Paste Time Range:

Paste and apply Time Range from clipboard.



### Fill Insert Keys:

Insert keyframes at every frame/specified interval between selected keyframes or specified time range ([Example Video](#)).



### Forced Playback:

Force an initial playback where every frame is loaded, then runs normal real-time playback. Useful for pre-caching systems like tyFlow.



### Fuse Keyframes:

Keyframes are unified at the average time and value, similar to welding of mesh vertices.



### Invert Keyframe Selection:

Invert current keyframe selection.



### Jump To Next Time Tag:

If Time Tags are present in the timeline, navigates in time to the next available Time Tag.



### Jump To Previous Time Tag:

If Time Tags are present in the timeline, navigates in time to the previous available Time Tag.



### Keys Copy:

Copy selected keyframes in the Track View to memory/clipboard.



### Keys Paste:

Paste keyframes to selected Tracks from memory/clipboard.



### Keys Flip X:

Mirror keyframes in time ([Example Video](#)).



### Keys Flip Y:

Mirror keyframes in value ([Example Video](#)).



### Insert Key:

Insert keyframe at time slider, or specified time using automatic or manual values.



### Keys Normalize Values Tool:

Normalize keyframe values within a specified range ([Example Video](#)).



### Keys Offset Time Tool:

Offset keyframe time ([Example Video](#)).



### Keys Value Offset Tool:

Offset keyframe values ([Example Video](#)).



### Keys Scale Values Tool:

Scale keyframe values ([Example Video](#)).



### Linearity Tool:

Select or delete keyframes that do not provide enough value change in relation to adjacent keyframes. Can be used to clean out "unnecessary" keyframes ([Example Video](#)).



### Save Time Tags To File:

Save Time Tags to a text file.



### Load Time Tags From File:

Loads Time Tags from text file and applies it to the scene.



### Loop Duplicate:

Quickly duplicate keyframes with automatic offset and alignment ([Example Video](#)).



### Motion Mixer To Clipboard:

Copies a List of the Name and Frame Ranges of Clips inside the Motion Mixer.



### Open Track View Time Control:

Open a dockable time control for the Track View. Provides a way to control time when Track View completely covers 3ds max main interface.



### Quick Snap To Frames:

Snaps keyframes to full frames.



### Ramp Values Tool:

Fade in or out keyframe values ([Example Video](#)).



### Time Rebuild:

Rebuilds the animation curve by replacing keyframes with keyframes aligned to full frames.



### Scale Time Tool:

Scales keyframe time.



### Select All Keys:

Select all keyframes in selected tracks.



### Select Key Range:

Select all keyframes between selected keyframes, or within specified time range.



### Set In Time To Current Frame:

Set scene animation start at the current frame (slider time).



### Set Out Time To Current Frame:

Set scene animation end at the current frame (slider time).



### Set Time Range:

A tool for quickly set start and end frames for the scene.



### Snap Values:

Values are snapped to the interval of a specified value ([Example Video](#)).



### Spring Keyframes:

Tool to automatically create springy motion.



### Straighten Keys:

Keyframes between first and last keyframes are straightened. Does not change tangent type like native tool, and provides a second mode where keyframes are straightened over selection gaps.



### Tangent Tool:

A tool for quick mass tweaking of keyframe tangents. Tangent heights can also be specified using relative numbers and controller units, allowing for more intuitive animation ([Example Video](#)).



### Time Tag BPM:

Generates keyframes based on beats per minute.



### Time Tag Filter Tool:

Works in conjunction with above tools, where only Time Tag names matching the one specified in the Filter Tool is navigated to.



### Trim Keys After SliderTime:







































Removes all keyframes after Slider Time.



### Trim Keys Before SliderTime:

Removes all keyframes before Slider Time.

# - Transform

-  **Align Transform To View:**  
Aligns the Transform of Selection Objects to the Active View.
-  **Align View To Surface:**  
Aligns the View to the Normal of the Picked Geometry Face.
-  **Align View To Transform:**  
Aligns the View to the Transform of the First Selected Object.
-  **Align Working Pivot To Edge:**  
Aligns the Working Pivot to the first Selected Edge.
-  **Align Working Pivot To View:**  
Aligns the Working Pivot to the Active View.
-  **Apply Default Controllers:**  
Assign the Default Controllers on respective Transform Component. Can also bake animations.
-  **Limit PRS:**  
Automatically assigns Limit Controllers to Picked Transform Components and sets Min and Max to the Current Value.
-  **Copy Transform To Clipboard:**  
Copy transform or individual components (position, rotation, scale) from objects to clipboard.
-  **Paste Transform From Clipboard:**  
Paste transform or individual components from clipboard to objects.
-  **Copy View Transform:**  
Copy the transform and FOV of the current perspective view to clipboard.
-  **Paste View Transform:**  
Paste and apply the transform and FOV from clipboard to the current perspective view. A quick and easy way to match views without the need for cameras.
-  **Create Grid On Surface:**  
Creates a Grid on Surface with Interactive Offset, and quick options to Align View and Activate Grid.
-  **Edit Working Pivot:**  
Enters the 'Edit' Mode for the Working Pivot Without Resetting the Working Pivot Transform.
-  **Get Sub Selection Position:**  
Copy the position or position centers from selected Sub Objects to clipboard.
-  **Grid Settings:**  
Set various Grid settings from a popup menu.
-  **Grid Size By Distance:**  
Set Grid spacing by the distance of two picked points in the scene, divided by specified amount.
-  **Grid Size Subdivide:**  
Reduce grid spacing in half.
-  **Grid Size Superdivide:**  
Increase grid spacing by double.
-  **Lock Transform:**  
Lock all or individual transform components (position, rotation, scale) in selected objects.
-  **Unlock Transform:**  
Unlock all or individual transform components (position, rotation, scale) in selected objects.
-  **Look At Point:**  
Orients selected objects so that an axis points towards the picked point in the scene.
-  **Mirror Object Placement:**  
Mirrors Object Placement across Picked World Axis.
-  **Object Position To Unreal Position:**  
Translates the positions of selected objects into Unreal Engine position format, ready to be pasted into Unreal Engine.
-  **Orthoganize Transform:**  
Applies an orthogonize operation to selected object transforms.
-  **Pivot Center:**  
Individually centers the pivot on all selected objects.
-  **Pivot Center Bottom:**  
Individually positions the pivot on all selected objects in center bottom.
-  **Pivot Center Top:**  
Individually positions the pivot on all selected objects in center top.
-  **Quick Controllers:**  
A series of tools that Quickly assigns common Transform Controllers to Selected Objects.
-  **Reset Perspective View:**  
Resets the transform of the Perspective View to the default.
-  **Reset Position:**  
Reset the position of objects, ie. set object's position to [0,0,0].
-  **Reset Rotation:**  
Reset the rotation of objects, ie. set object's rotation to (quat 0 0 0 0), and Euler XUZ to [0,0,0] if applicable.
-  **Reset Scale:**  
Reset the scale of objects, ie. set object's scale to [1,1,1] (100%).
-  **Reset Transform Offset:**  
Resets the Transform Offset on selected objects.
-  **Reset Xform Collapse:**  
Performs an 'Reset Xform' and also Collapses the Modifier Stack.
-  **Reset Xform Collapse Plus:**  
Like Reset Xform Collapse, but maintains the object's transform.
-  **Scale Screen Space:**  
A tool for Scaling Size and Position of Selected Objects Towards or Away from the Active Perspective View.
-  **Super Align:**  
Similar to 3ds max's native Align tool, except with no dialogue. Default behaviour aligns position to pivot of target, holding SHIFT aligns to the center, holding CTRL aligns rotation, and holding ALT matches scale.
-  **Swap Two Objects:**  
Swaps the transform of two selected objects.
-  **Toggle Affect Pivot:**  
Like 3ds max's native function, but with the addition of redrawing the viewport to reflect entering the mode.
-  **Toggle Parent Coordinate System:**  
Sets the Coordinate Reference System for the current Transform Tool to be the Coordinate System of the Parent Object.
-  **Working Pivot Look At Point:**  
Aligns axis of the Working Pivot towards a picked point in the scene.
-  **Working Pivot Reset:**  
Resets the transform of the Working Pivot to default.
-  **Working To SubSel:**  
Positions the Working Pivot in the center of selected Sub Objects.