AUTODESK **UNIVERSITY** 2015

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Stop Wasting Clicks in Alias

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Learning Objectives

- Discover the Selection Options and how to modify them to mesh well with your style of working
- Learn how to utilize the selection modes inside of Alias commands to their full capability
- Learn how to effectively use the different snap modes on the fly
- Learn how to take advantage of the options that affect performance with varied file sizes and files with layered history

Description

There are so many techniques to save you time and help you create the surfaces you want in Alias software. I have found that many of these techniques are new to, or overlooked by, seasoned professionals and are certainly useful to new users as well. These methods of working can speed up your use of nearly every command within Alias software. This class applies to all surface work, from concept through production class "A" for any design, whether it's product development or automotive.

Your AU Expert

Don Lloyd is just a guy who enjoys sculpting surfaces in Alias software. He has been a senior digital designer using Alias products at Nissan Design America for many years now. His work there ranges from early conceptual through production class-"A" surface of automotive interiors and exteriors. Don teaches a series of classes on digital sculpting using Alias at Schoolcraft College in Livonia, Michigan, and has taught at the College for Creative Studies in Detroit, Michigan. Alias software has been his tool of choice for 18 years now. Don previously worked as a digital sculptor at SLP Engineering, Inc.; General Motors Company; and Chrysler Group LLC. Before using Alias software he used AutoCAD software professionally to create anything from electrical schematics to architectural drawings to complex 3D manufacturing drawings and assemblies starting in 1986.

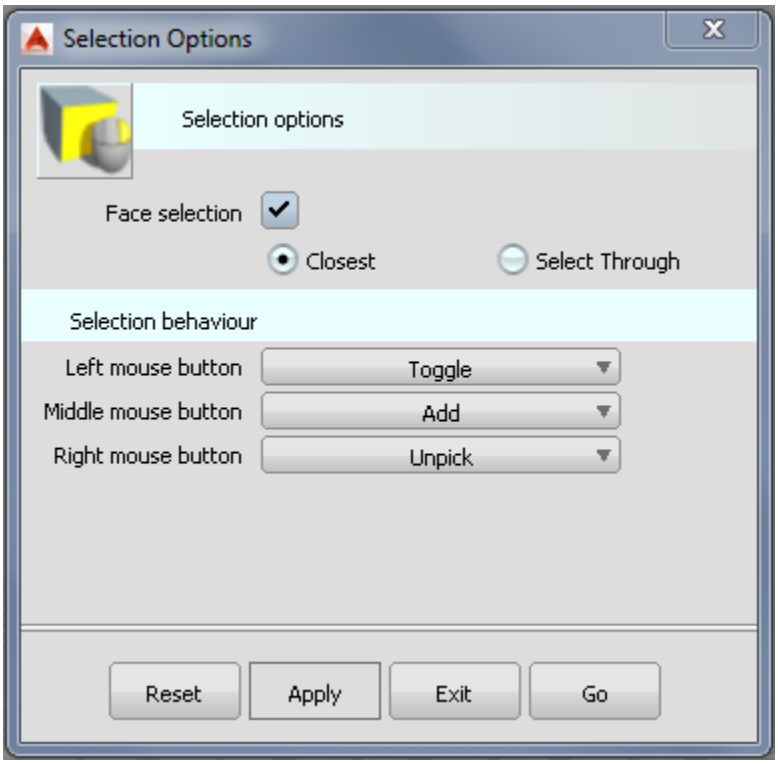
Discover the Selection Options and how to modify them to mesh well with your working style

Selection Options

The Selection Options menu was added in Alias 2011 and allows you to setup the functions of the buttons on your 3-button mouse to your liking. The *Add* function was added, as an option, to *Toggle*, *Pick*, and *Unpick*. Throughout this document - *LMB*, *MMB*, and *RMB* will be used to refer to the Left Mouse Button, Middle Mouse Button, and Right Mouse Button respectively.

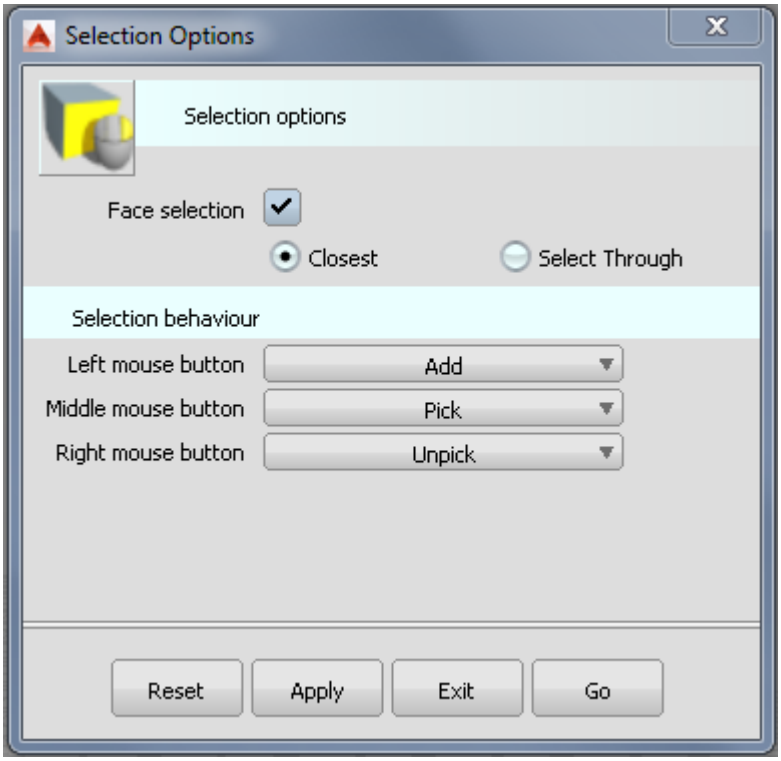
Pull down menu Preferences -> Selection Options [box]

- Choices – Pick, Unpick, Add, Toggle
- Defaults – Toggle | Add | Unpick



- Toggle is the lowest value button – it's nearly useless when you are using *all* the buttons

- Try this – Add | Pick | Unpick



- Then use **all the buttons**.

Pick nothing, pick object.
No. Just stop. This is not often needed. You're just doing this out of habit. Simply move on to the next command. If the next command is a creation command, the selected object will automatically be un-selected. If the object that you currently have selected is not what you are going to *modify* with the next command, use the *MMB* to select the item that you do want.

Learn how to utilize the selection modes inside of Alias commands to their full capability

Selecting within a tool
The Selection Options within the Alias tools are often underutilized. There are many ways to alter your selection within the tools.

Standard mode
Use the LMB to select another individual item of the type that you selected last.

<Shift> select
Use <Shift> to change the selection mode into what it is when you are not in a command. This will also enable face selection within a transform tool.

<Ctrl> select
Use <Ctrl> and the arrow keys to move around individual or multiple CVs or hulls within a surface. The arrow keys will move you around in single steps and "wrap around" the edges, as well.

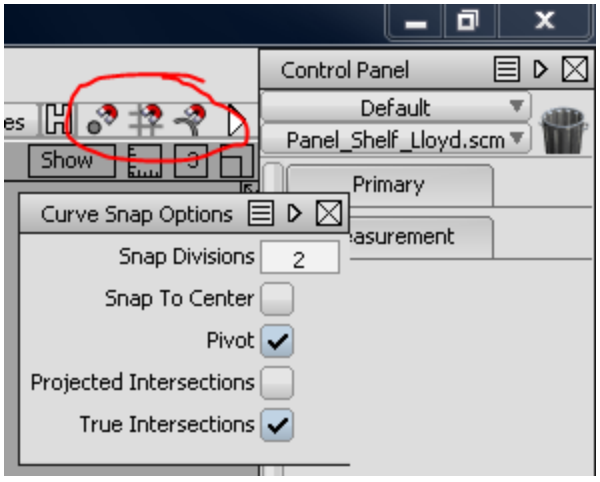
The Space Bar & Double Click
The Space Bar can keep you from wasting a lot of un-needed mouse movements. Double clicking can really speed up repetitive command selecting.

Selecting Go…
Use the *Space Bar* to select the *highlighted* action on the screen. This works for command actions and verifications that come up on the lower right of the screen (Examples: Update, Next Curve, Trim modes – Keep/Discard/Divide/Resume) and Confirm Windows (Examples: Yes, No).

Double Clicking
Double Click on the top menu option or tab to select the last command that was selected under that pull down menu (*LMB* or *RMB*) or tab (*RMB*). If you had used *Palette -> Curves -> New Curves -> New Edit Point Curve* the last time that something was selected under *Palette -> Curves* you could simply double click *LMB* on *Palette -> Curves* and you would be back to creating new Edit Point Curves. Be aware that hot keys can reference commands under the top menu option, making that command the *last used* command.

Learn how to effectively use the different snap modes on the fly
Using snap modes efficiently can really help you move smoothly and fast.

Snap modes
Snap modes can be turned on and off for long periods of time using the buttons in the upper left corner of the main window. Don't do this! There is only rare occasion to do such a thing. Normally, this is a waste of time. Activate the snap modes on the fly…

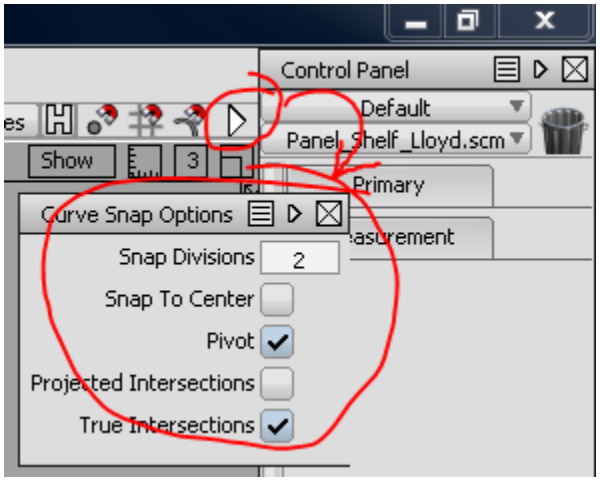


Point Snap
<Ctrl> activates the Point Snap while it is pressed.

Grid Snap
<Alt> activates the Grid Snap while it is pressed.

Curve Snap
<Ctrl + Alt> activates the Curve Snap while it is pressed.

Curve Snap Options
The curve snap options are accessed by clicking the arrow (triangle) to the right of the Snap Modes. These are often underutilized and can be quit helpful.



Snap Divisions
Use these to add selectable points along any curve or *curve-like entity* (surface edge, curve-on-surface, isoparm…). The default setting is 1 – this put points on each end of a curve. If this is changed to 2, it will add a point at the mid-point of the curve. This number can be anything from 0 (effectively turning off any specific point along the line) to 100 (why would you do that). I find 2 to be very useful.

Snap to Center
This allows you to snap to the *geometric* center of the object you are snapping to. This is not necessarily the center point of a circle or arc. In order to select this point, after pressing and holding <Ctrl = Alt> and clicking on the relevant entity, hold down the mouse button and move your mouse to the amber point at the entity's center. This is often not very useful. I leave this unchecked.

Pivot
This allows you to snap to the *pivot* of the object you are snapping to. In order to select this point, after pressing and holding <Ctrl = Alt> and clicking on the relevant entity, hold down the mouse button and move your mouse to the green point at the entity's pivot. This can be quite useful. I often use this.

Projected Intersections
This will highlight any apparent intersections, based on your current view, and make them selectable. This is rarely useful and can add a great deal of unwanted snap points along a curve.

True Intersections

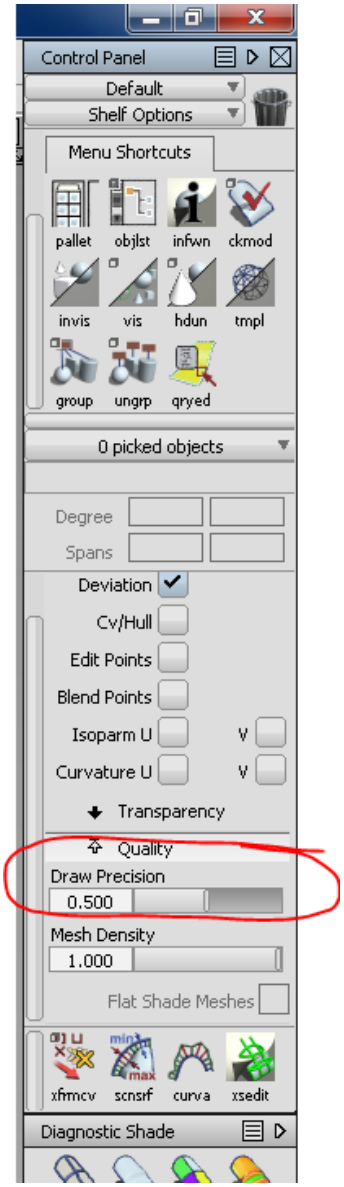
This will highlight any actual intersections and make them selectable. This is very often useful although, at times, it can also add a great deal of unwanted snap points along a curve. I generally leave this on.

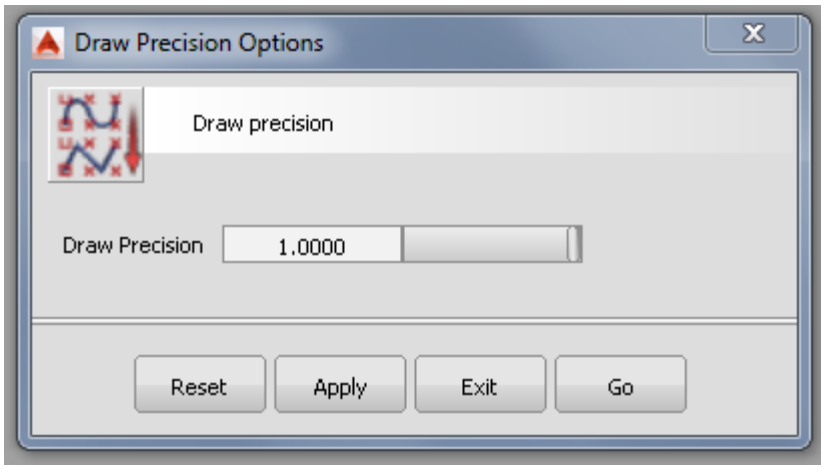
Learn how to take advantage of the options that affect performance with varied file sizes and files with layered history

There are some simple options that can help you when working in very large files and files with a lot of history on the geometry.

Draw Precision

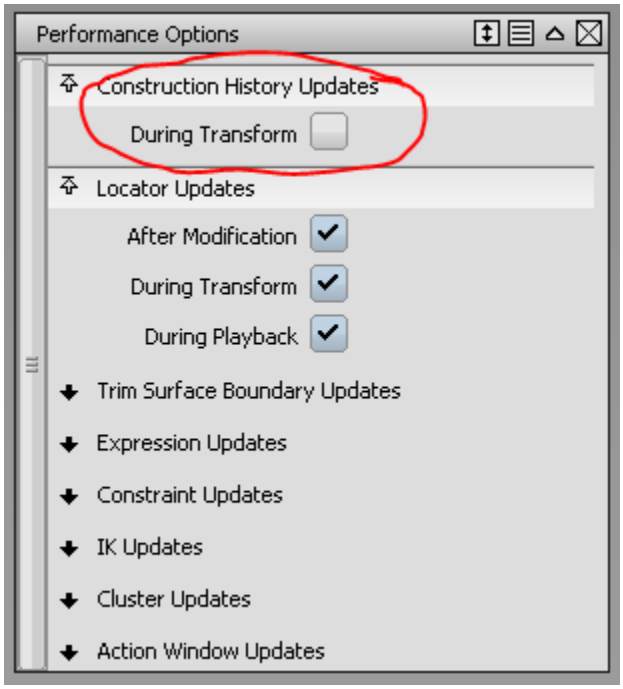
Find this option in the Control Panel under *Display -> Quality* (about half way down) and can also be accessed by the pull-down *ObjectDisplay -> Draw Precision [box]*. This option affects the smoothness of the wire display and how much graphics power is required to display it. The setting value ranges from 0.000 to 1.000, where 0.000 is the coarsest (curves look the least accurate and are shown as a series of few straight lines) graphics display requiring the least graphics calculations and 1.000 is the finest (curves look the most accurate and smooth) graphics display requiring the most graphics calculations.





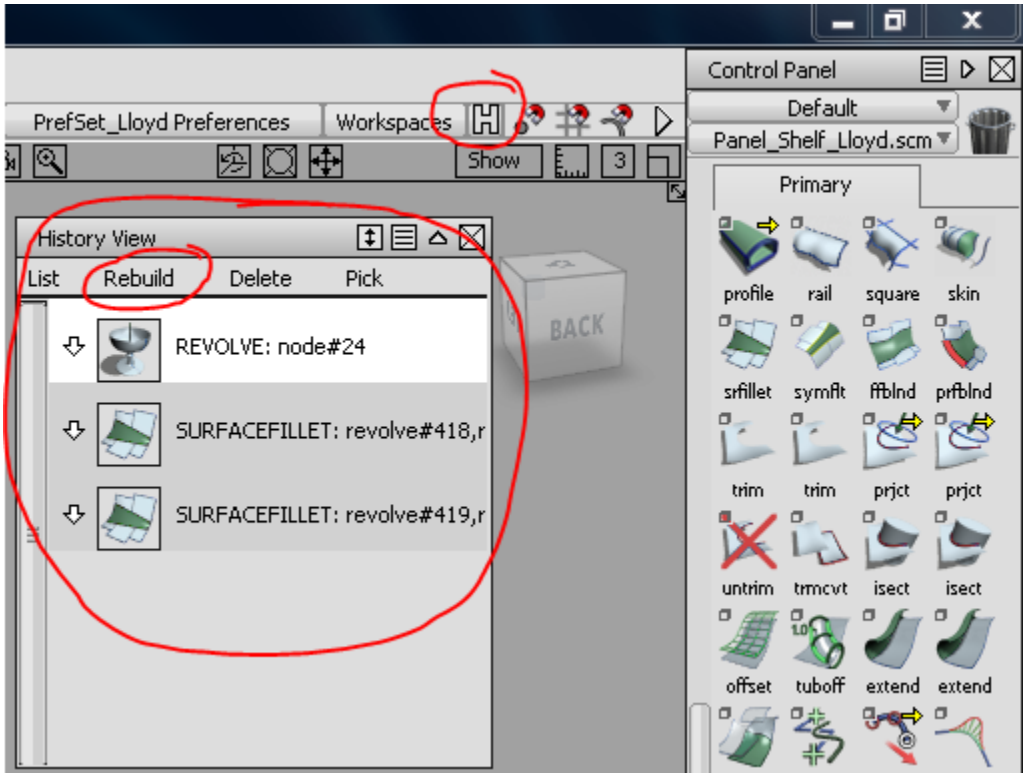
Performance Options

In the pull-down *Preferences -> Performance Options* is one checkbox that can really make a difference when you are editing an object that affects some complex geometry using History. When this box is not checked, any updates to the affected geometry does not happen until you let go of the mouse button that is depressed while making the change. If this is checked, it will attempt to update the geometry continuously while you are editing. This can really slow down your process. I leave this unchecked by default and check it only temporarily when I want to see continues updates to relatively simple geometry.



History View

History Rebuild can be globally or selectively suspended using the History View options. The History View is located to the immediate left of the snap modes (looks like an H) and is only present when the file contains objects with history. If you want to edit an object that affects many others through history, it can be helpful to suspend the rebuilds of those other objects (if they are first highlighted in the History View) or Globally suspend all History rebuilds. Use either *History View -> Rebuild -> Suspend Selected* or *History View -> Rebuild -> Global Suspend*. After you have completed the edits that you were doing go to *History View -> Rebuild -> Resume* to update the other geometry.



Thank-you for looking this over! I hope you find that these tips help you in your work.