Overview of the Maya 2018 interface

Introduction
Like all 3D applications, Maya 2018’s interface has many layers of controls. This is a typical view:

These controls include **drop-down menus**, **icons**, **tabs**, **sliders**, **data entry boxes**, **radio buttons**, **check boxes**, **key shortcuts**, and **screen layouts**. We will study and use all these during the course, but due to time limitations we’ll look at only a small element of what Maya can do. However, this will be enough to get you started with a mid-level online or instruction book course.
**Viewports**

These are the two main **viewports**. The **Perspective/Orthographic 3D window** shows you a view of your scene in the three dimensions of space; the **Timeline** below shows its changes in the fourth dimension of time. The 3D window also has its own controls in the menu bar at its top; these menu items refer only to the particular window they are a part of and the way it shows the scene; they do not affect the scene’s models, properties, and animation.

Navigation in the 3D window requires a three-button mouse, as navigation in Maya is a combination of one keyboard key and one mouse button. The keyboard key is always either the Alt (Windows) or the Command (Mac) key. Holding the appropriate one down, if you left-click and move your mouse up and down, the scene in the view port rotates around a horizontal axis; moving left or right, a vertical axis. Navigation is just a combination of these actions, so if we hold down the Alt or Command key and right-click, we dolly the camera (physically moving the camera, not zooming the lens); scrolling the mouse wheel also does this. If you hold down Alt or Command and middle-click, you pan the scene.

The time slider allows us to move through the animation that you have defined; it is controlled by a range slider. The range slider can be thought of as a magnifying window to the whole animation. Its start and end frames, as well as the start and end frames of the whole animation scene, can be specified by the numbers in the boxes to right and left.

Underneath the time slider is the MEL (Maya Embedded Language) line to type commands into Maya, and then at the bottom is a help line, which when you hover over it tells what tools do along with hints on their use.
The 3D viewport **quad view** is toggled by hitting the spacebar. Whichever view the cursor is over when you hit it again, that view will become the new full screen.

**Viewport menus**

Each viewport in Maya has a menu along the top as well as icons that access useful functions. The icons change slightly depending on which renderer is selected from the panel Renderer choices (in Maya 2018 there is only Viewport 2.0 but others may be added in future versions). You can toggle the panel toolbar visibility with **Ctrl+Shift+M**. Note that in quad view these may not show all the available functions on the right; to access hidden icons simply hide left hand groups of icons with the fine vertical gray lines between them. A line with a rectangle in its center means that the icons it controls are visible; clicking on it turns it into a line with a small arrow pointing right, which means the icons are hidden.

The View drop-down menu controls camera settings and what is seen in the viewport; Shading controls how objects are shown in the viewport, Lighting how they are lit, and Show what appears. In Maya 2018 there is only one option under the Renderer panel (formerly there were several) but this may change in future versions.

There are three horizontal lines of text and icon controls above the 3D window. For now, it's enough to know their names. Their function will become clear as we work with Maya.

**Specific controls**
Moving to specific icons, the selection tools are on the left: the arrow is the **Direct selection** tool and its key shortcut is Q. Below it is the **Lasso** tool: this selects items by drawing a line around or through them. Below that again is the **Paint** selection tool, which selects items by painting over them. Double click any of these icons to show their settings. A new selection replaces an existing selection unless you hold down the Shift key, in which case it is added. Holding down the Control key removes newly selected items.

The brush size for the Paint selection tool is changed by adjusting the slider controls in the options dialog box. Note that you don’t have to hold down the Shift key to add to the selection with Paint. To remove from the selection set, hold down Control as with the other keys.
The **Transform** tools are the regular Move, Rotate, and Scale commands common to all 3D applications. Rotate and Scale take place around the object's **pivot point**; with Move it doesn’t matter where the pivot point is. As with the Selection tools, double clicking on the icon opens the settings dialog box.

The **Window Layout** tools are generally unnecessary – you simply hit the spacebar to go to a standard 4-view. Then move your cursor inside one of the views and hit the spacebar again to make that view full screen. If the regular selections aren’t what you need, go to the View menu item in the 3D window top bar and choose an alternative from the list, or hold down Alt and drag with the left mouse button in a perspective view (ortho views are locked to that view).

When you use a specific tool to edit a model, the tool’s icon appears just above the Window layout tools. Be aware that tools in Maya are persistent: in other words, they stay active until you deliberately use the Selection tool to end that tool’s activity, but a last used tool can be reactivated by clicking on its icon in this location.
The Editors appear on the right side of the interface in the default layout. These are the Channel/Layer editor, the Modeling toolkit, and the Attribute editor. Because you need to jump between these two editors so often, you can toggle between the Channel/Layer and the Attribute editors with Ctrl+A. They can also be accessed from the icons just below the Workspace drop-down menu in the top right corner of the screen.

A fourth useful editor, the Outliner, can be accessed by clicking on the icon below the Window Layout tools. (Since in class we have to use a low resolution version of Maya this tool is covered by the Maya logo and does not appear in the videos).
The **Menu Set** gives you selections of drop-down options to customize Maya for various activities.

Enough for now!

Chris Yonge – 20190906