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I. Storyboards continued

A. Purpose

1. Drawing pictures helps you find out how you are going to develop the action of the film.
2. Blueprint for all people involved in the making of the film.

B. Shot Terminology - Used to describe shots on the storyboard.

1. ELS - Extreme long shot
 - a. Subject matter is dwarfed by their surroundings.
 - b. Usually sets the stage. Establishing shot.
2. LS - Long shot
 - a. Shot is framed with a good portion of the surroundings.
 - b. Subject matter is scene from head to toe within the frame.
 - c. Creates an emotional detachment with the subject matter.
3. MLS - Medium long shot
 - a. Subject matter is shown from head to toe, not quite touching the top and bottom of frame.
 - b. Surroundings are still recognizable.
4. MS - Medium shot
 - a. Subject matter is shown from head to toe, stretching from top to bottom of the frame.
 - b. Surroundings are visible.
5. MCU - Medium close up
 - a. Head and shoulders shot.
 - b. Surroundings are less important, the subject matter is the focus of the shot.
6. CU - Close up
 - a. Maximum emotional effect.
 - b. Allows for intimate detail of the subject matter.
7. ECU - Extreme close up
 - a. Usually used to show detail that isn't normally seen by the human eye.
 - b. Subject matter is abstracted out of the frame.

II. Sets

A. Usage

1. Easy way to group and access groups of selectable objects for animating.
2. Can be used to assemble "related" objects so they can be picked and manipulated together more easily.

B. Creating Sets

1. Select the CVs or objects which you wish to have in a set.
2. Edit -> New Set - open to create new sets.
3. Members - determines the exclusivity of a member
 - a. Exclusive - members are not allowed to be in any other set.
 - b. Multiple - picked elements are allowed to be in more than one set.
4. New set shows up in the Set Lister.
5. Sets do not show up in SBD.
6. New sets have their own pivot point.

C. Working with Sets

1. Window -> Sets -> Set Lister - allows you to pick sets in the modeling world by selecting one or more list items.
 - a. Picking sets - Simply select set in Set Lister.
 - b. Picked sets are reflected in the modeling world, and in the SBD.
 - c. List - allows to show all or picked sets.

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- d. Modify
 - 1. Allows you to remove, create sets.
 - 2. Allows you to add or delete selected objects, CVs from a set.
 - 2. Layer bar selection - gives you quick access to all of your set needs.
 - a. Lister - opens the Set Lister
 - b. Picking sets - simply pick the set in the menu, and it is highlighted in the modeling world.
 - c. Editing sets - simply select the dialog box icon next to the set name to open the Set editor.
 - 3. Set Editor - used to add, remove members from sets, or change names and type of sets.
 - a. Opened with the Arrow button in Set Lister.
 - b. Set name - can be used to change a sets name.
 - c. Type - can be used to change exclusivity of set members.
 - d. Picklist updating - used to update picked objects in the modeling world.
 - i. Auto - ON - automatically picks objects in the world.
 - ii. Update - activated when Auto is toggled off. Updates the pick selection in the modeling world.
- D. Animating Sets
- 1. Treat them like any other object to be animated.
 - 2. Select sets to be animated in the Set Lister.
 - 3. Set keyframes where appropriate.
 - 4. Sets show up as the individual descendants of that set in the action window, not as a singular object. (read: a serious number of CV's)
 - 5. Excellent tool for creating deforming surfaces.

III. Keyframe Handling

- A. Keyframe copying works like this: You select an object or objects, then you copy a scope of keyframes from within a range. Only the xforms, values, and keyframes are copied from selected objects. *NOTE: only xforms, and their values are copied. They are then pasted into the same xforms and values on other objects at specified frames.*
- B. To copy keyframes, you need to select the objects you wish to copy keyframes from.
 - 1. SBD nodes can be selected.
 - 2. Objects can be selected in the modeling world.
 - a. Objects selected in the modeling world, are the top node of a hierarchy.
 - b. Make sure when copying keyframes, you select the appropriate node to copy, or traverse up and down the hierarchy.
- C. Copying - Edit -> Copy keyframes -
 - 1. Parameters - the scope of keyframes to be copied from selected objects.
 - a. All - copy every animatable parameter of an object.
 - b. Global - copy only the parameters selected in the GLOBAL parameter control window.
 - c. Local - copy only the parameters selected in the LOCAL parameter control window.
 - 2. Hierarchy - copies the keyframes from the hierarchy above, below, or on both sides of a selected node.
 - 3. Copy Method
 - a. Keyframe - copies only the keyframes within the selection range.

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- b. Segment - copies the keyframes from within the selection range, but also places new keyframes on the first and last frames in the range.
 - 4. You are prompted in the command prompt for the frame range. Type in the start and end frame you wish to copy.
- D. Deleting - Edit -> Cut keyframes -
 - 1. Similar area definitions as the Copy keyframes dialog.
 - 2. Make sure you have the appropriate node selected for keyframe deletion.
 - 3. Make sure you are certain of the scope and animatable parameters of the object.
 - 4. Rethink your start and end frame for your range before you make a deletion you cannot undo.
 - 5. An easier method would be to Select -> Keyframe in the action window, and then Edit -> Cut them out.
- E. Pasting - Edit -> Paste keyframes -
 - 1. Pasting copied keyframes is limited to pasting parameters into the channels copied from. (*Copying curves allows you to move action curves and keyframes between parameters.*)
 - 2. Parameters - similar to Copy and Cut keyframes, refer to above.
 - 3. Paste method - determines the way keyframes are pasted.
 - a. Insert - If there is already an animation curve on an object, the keyframes are inserted, and all frames on the curve are moved down the curve.
 - b. Replace - keyframes pasted overwrite any keyframes already on an animation curve.
 - 4. Range fit - determines the
 - a. None - No range fitting is done, all keyframes are pasted into an object.
 - b. Scale - all keyframes from the clipboard are scaled to fit into the paste range. (*Determined at the paste command prompt.*)
 - c. Fit - all keyframes from the clipboard are pasted into the object as long as they are within the start and end time. (*Pasting 90 frames into 80 truncates the remaining 10 frames.*)
 - 5. Command Prompt: (start, repeat, gap, end)
 - a. The first argument is the first frame you want to paste into.
 - b. The second argument is a repeat number. If you don't wish to repeat the paste, simply type 1.
 - c. The third argument is the gap space (in frames) between the repeated pastes.
 - d. The fourth or final argument is the end frame of the paste.
 - i. This number can be left empty if you are pasting None range fit. all keyframes will be pasted into all objects.
 - ii. For Scale or Fit, it is necessary to provide the final frame of your range.
- F. Animation Curves - copying and pasting keyframes and values between channels.
 - 1. In the action window, Select -> Curves to select the channel you wish to copy.
 - 2. Then select the object and channel you wish to paste the curve into.
 - 3. The curve is pasted into the new channel with the same placement of keyframes and values. (*Some tweaking may be necessary for the values, but keyframes should be rock steady.*)
 - 4. Solves the pesky problem of copying and pasting only into the same channels.

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- G. Copying Segments - a segment being defined as the place between the first and the last keyframe of a selection.
1. In the action window - select the keyframes you wish to copy.
 2. Edit -> Copy segment - copies the segment between the two keyframes to the clipboard.
 3. Select the channel and action curve you wish to paste the segment into.
 4. Edit -> Paste segment - You can click on the an action curve to place the segment interactively, or type at the command prompt. *Note, pasting interactively with the mouse is only available to animated channels, pasting to unanimated channels requires keyboard input.*
 5. Edit -> Paste segment with offset - allows you to paste the segment with a value offset