

Art 384: Introduction to 3D Animation

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Lecture 8

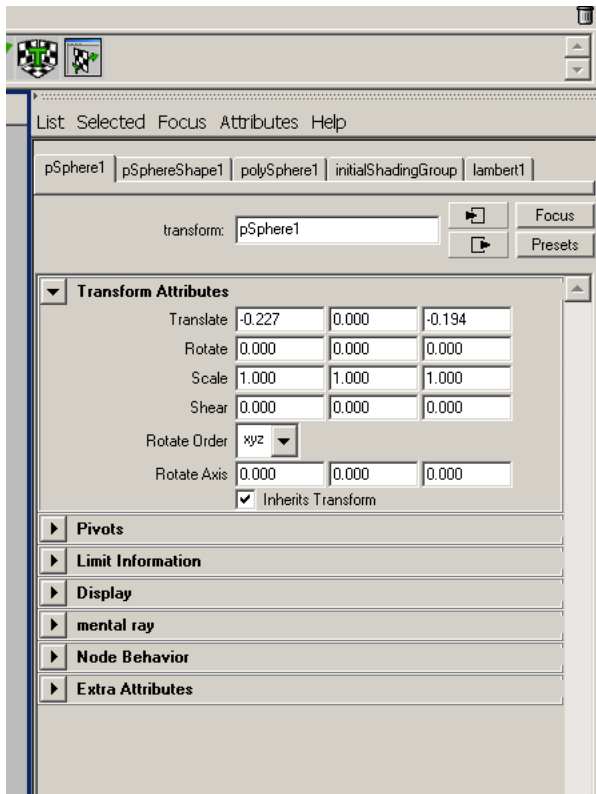
Schedule

- Roll
- Wrap-up Writing Assignment
- Attribute ed, channel box
- First rigging
- First modeling?

Head Transplant Results

- Be a Ray of Sunshine
 - Irritating people interfere with business
 - RoS's are better to work for
 - No one will tell you: I'll give you \$500,000 to cheer up, bathe more, floss-- except Neal.
 - Who gets the call? Who's on the list? Who else is qualified?
- Network! Start now! Yesterday!
- You never know what job is important.
- Draw more. Draw every day. Now.

The Attribute Editor



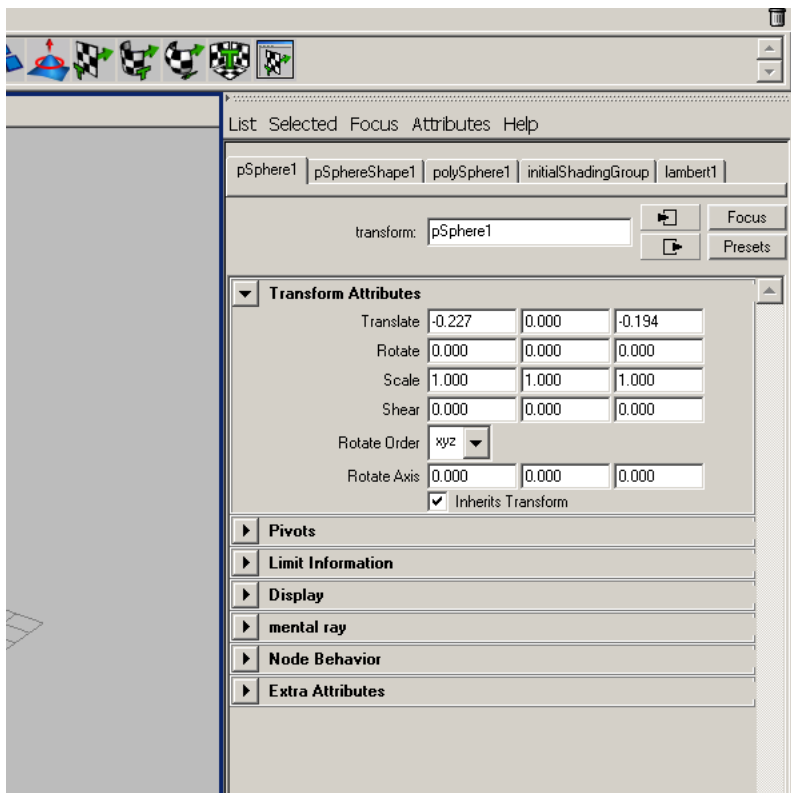
- Bring up with Ctrl-A
- Note Tabs: one for each component of the selected object
- There can be 100 tabs
- Several are special

Note communications

- Make a sphere, bring up the attribute editor, and move the sphere
- Numbers change
- Change the numbers: sphere moves
- 3 columns: X, Y, and Z
- Translate, rotate, scale-- shear? try it. Ew.
- Rotation order? In a minute

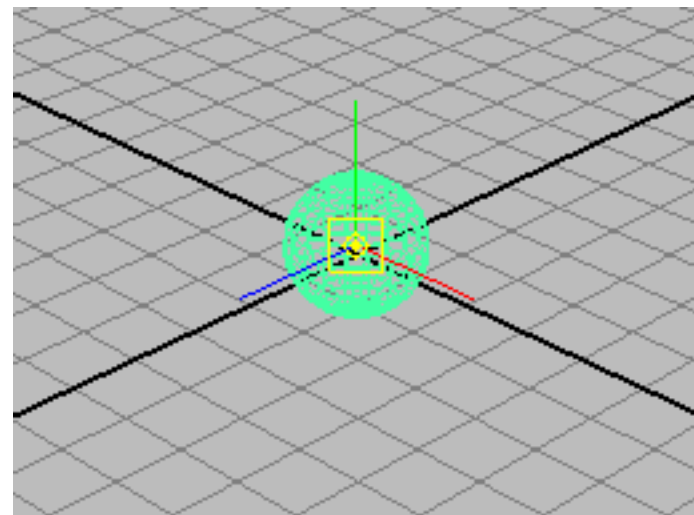
The group tab

- Groups are the foundation of rigging
- Groups are objects
 - them move things
 - maybe many things
- allow one translate, rotate, and scale
- Also have origins
 - "pivots", centers



Pivots?

- Rotations happen around a center. That's the group's pivot
- Scales also happen from a center
- Get the pivot move manipulator by pressing "insert" (on Macs, "help")
- XForm w/ no arrows
- not to animate!

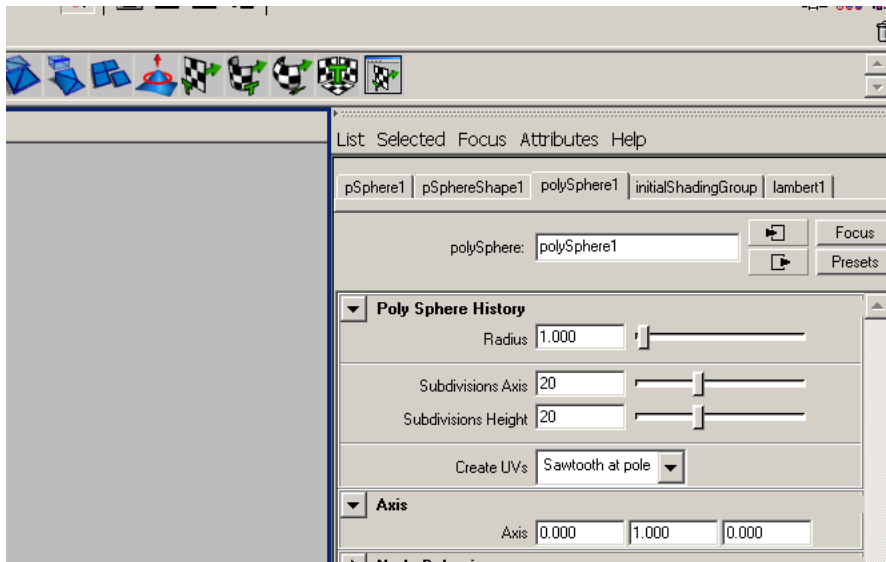


Uses of the Attribute Ed for groups

- Sanity checking
 - rotations of 5000 degrees? um.
 - scales of <0.00001 ?
- Alignment
 - make all rotations match, exactly-- this is CG, right?
 - line things up
- Setting animation keys on single attributes
 - Right-click on an entry box-- set key

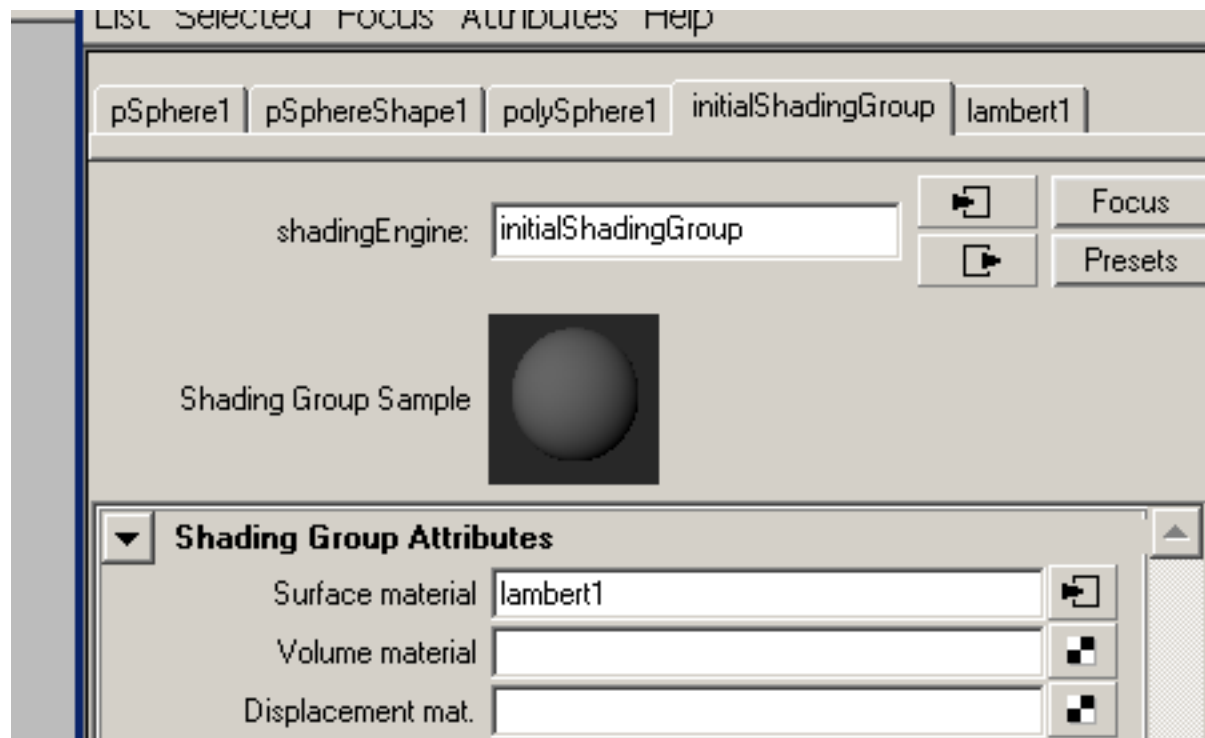
The Object Tab

- Shows arguments for object creation
- When you make a polygonal sphere, Maya makes a certain number of sides
- Set or reset those here



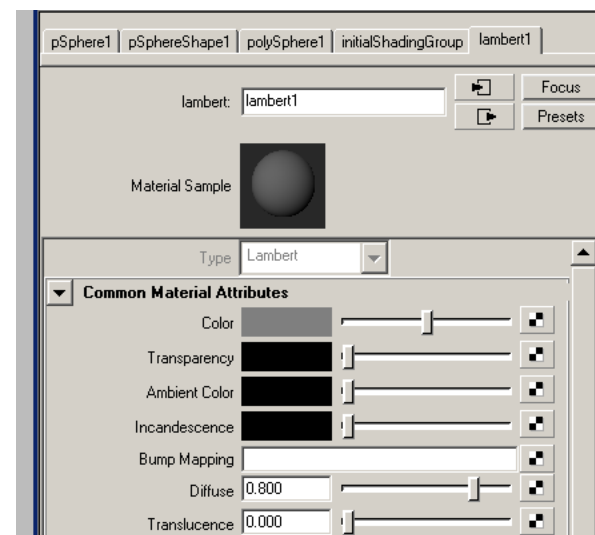
Shading Group Tab

- How materials get attached to objects.
- Really interesting, but leave it alone for now

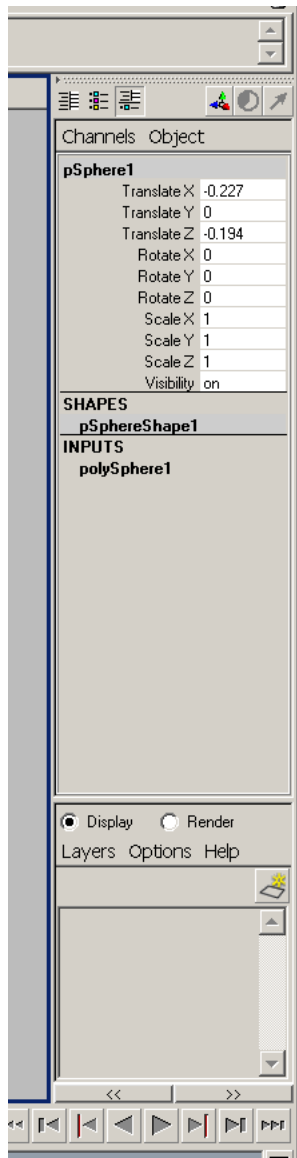


Material Tab

- Materials set color, transparency, shininess, lots of other things
- You can set the color of the material on the selected object here.
- A material is like a can of paint-- you need one for each color

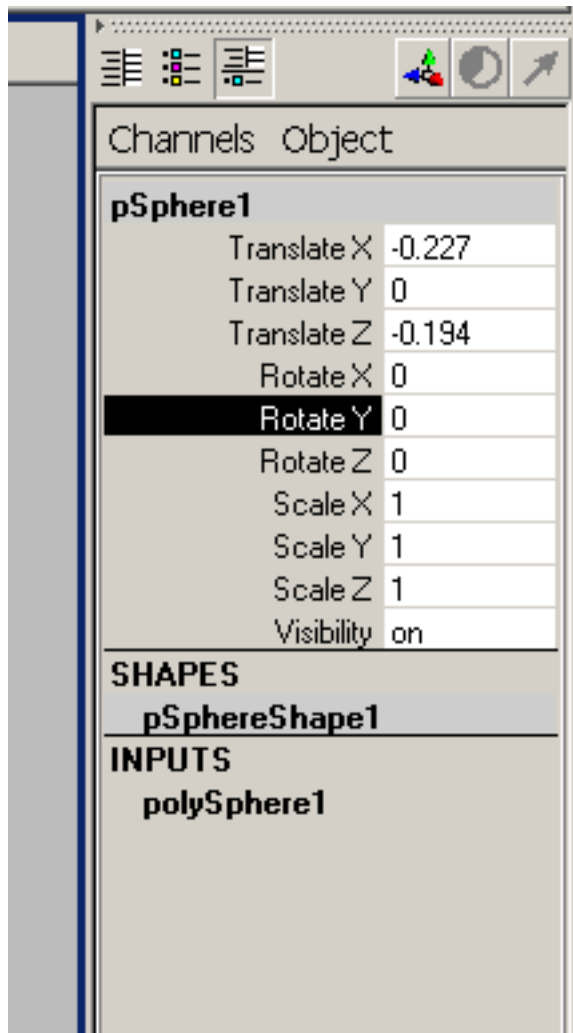


Channel box



- Hit control-a many times: attr ed, chanbox, attr ed, chanbox, AE, CB, AE, CB... heh.
- Vertical layout, more like outliner
- Not all attributes are visible-- only the "keyable" (animatable) ones
- Text entry, just like attr ed

Selecting Attributes



- Here, rotate-y is selected
- Middle-mouse drag in main screen now adjusts
 - make animations very quickly
- Right-click gives many, many attributes
 - locking, unlocking, set key, delete connections, add attribute, expressions

Did you notice that group?

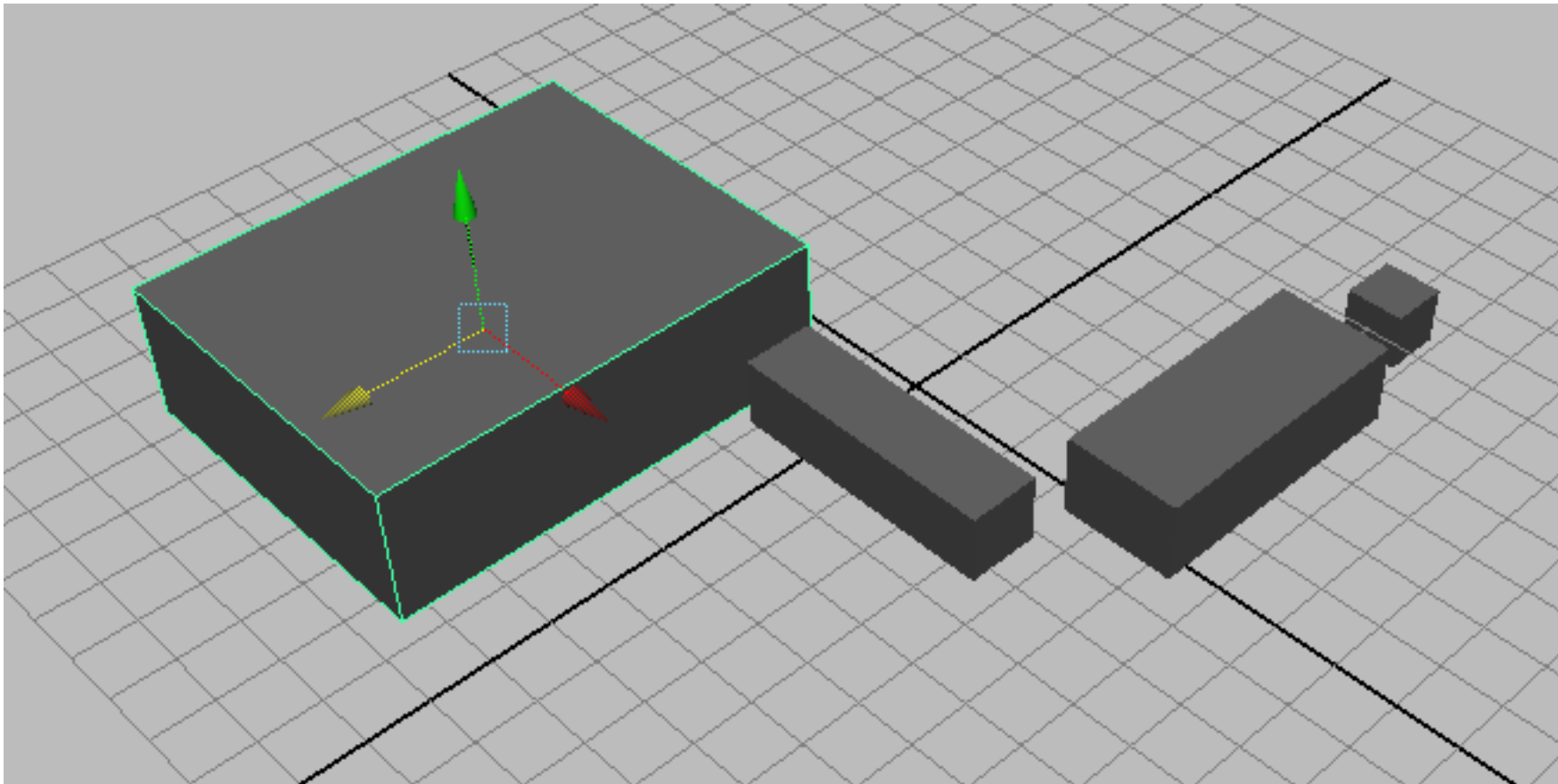
- Every object you make comes pre-wrapped in a group
- You can't have an object with no group
- If you put an object in a group, you're also putting its group in a group.

Hierarchies

- Stacks of groups! Groups owning groups that own groups!
- The outliner is very useful for keeping track of this
- Hierarchies of groups are rigging

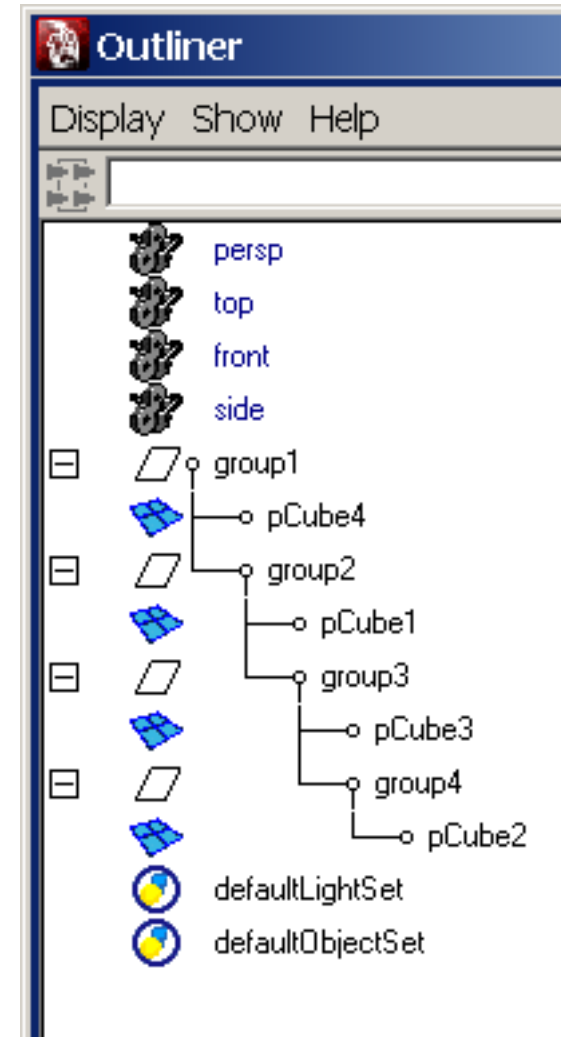
Let's make an arm that bends

- Make some evocative boxes (hey, Popeye!)



Making an arm

- Select one, Ctrl-g, select the next
- Open the outliner
 - (main menu->window->outliner)
- Use middle-mouse drag to put the groups inside each other



Try bending it

- The pivots are wrong-- the rotations all go around the origin
- However, the hand does follow the forearm, the forearm follows the upper arm
 - that's good!
- move the pivots to be on the joints
 - upper arm pivot goes on the shoulder
 - lower arm, elbow, hand, wrist