

Figure Sketches Development Notes commenced 28.04.14

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GENERAL THOUGHTS ON THIS PROJECT;

Ideas for script

how to make geo within which event occurs such as move geo or merge verts?

- use bounding box
- use falloff a la "get closest point" script

Ideas for footage made of a string of sketches

A string of POVs... each camera angle indicates a character ...eg. view from a bike. view of a person on a bike...
As each sketch (or vignette) is based on my sketches I guess it really does indicate a POV (ie my POV).

DIARY OF PROGRESS;

28_04_14

POSSIBLE USEFUL TOOLS

- parent (move position) and unparent (preseverve position). THIS allows me to position and align a poly primitive to a joint.
- tool to connect attrs such as **polySplitRing5 > Split Type** to a controller.... maybe to sliders that scroll through changing various attrs?
- perhaps the **ability to delete some history and add other history to my Anim Potential**

TEXTURING THOUGHTS / NOTES

texture as I model...

-- there's a big difference between surface shader and Lambert... maybe mix the two...

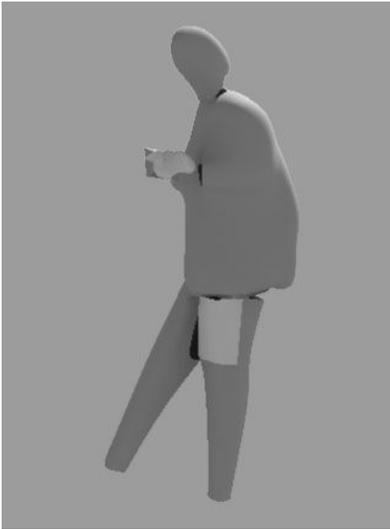
STEPS-

DOING and DONE

- using Rapid Rig Advanced. NO toon legs and arms (hoping it doesnt matter too much)...
- block in form with pieces of geometry (polygon cubes eg). do this quickly and roughly...
- Create "unintentional forms...by playing with history and "creation parameters" of polygon primitives eg **polySplitRing5 > Split Type = Mult**... then change "**Divisions**".
Perhaps as I work I could rig these attrs up to a controller?

TO TRY

- I could try making curves based on the sketch and create surfaces based on these curves.
The topology of such surfaces is intrinsically more interesting it seems...
- I could be recording the process (eg. duplicating the models every X seconds or X mouse clicks).
-- could the equivalent of the pencil strokes (ie that texture) come from (be contributed by) the mesh edges?
- think about **which parts move!** ie. maybe its his hands that are fiddling

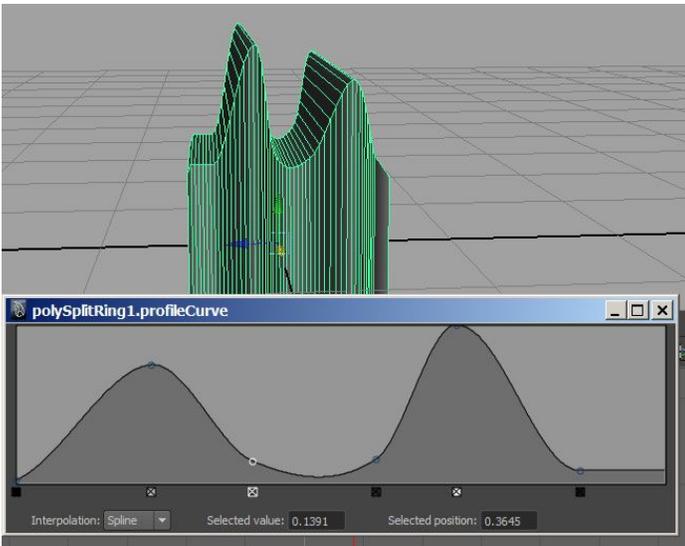


OBSERVATIONS

- changing parameters at the beginning of the tree makes a big change to the form of the figure (eg changing the number of divisions on a fundamental polyCube). I guess if there were initially more divisions on the cube to start with the change in form wouldn't be so radical....
- my compulsion is to join all the polys together. should I indulge this compulsion or resist??
- M as A recorded my modelling process (albeit by pressing a button). This one uses the modelling process by accessing history and animating parameters of that history.
- interesting to experiment with combinations of history... eg animate the translate Z (local axis) of an extrude node and also change the number of divisions on the original cube. The face that moves changes and the axis of movement also changes.
- maybe it needs to be **random on each channel** so that the hand movement is never the same...

29_04_14

I was thinking last night that it might be good to keep the models separate (not acquiesce to my desire to "combine" them). My reasoning was that I could manually add more detail rather than smooth the model; I thought that by snapping verts together (rather than merging) and then animating history the models would act as one.... I have since realised that the snapped verts are unlikely to stay together...



There are many options when it comes to animating the PolySplitRing node (eg. insert edge loop). I wonder if you can animate the profile curve shape?

DELETING HISTORY SELECTIVELY

I don't think this is possible..

I can use this cmd to delete all history `mc.DeleteHistory()`; but cant find any flags for this command.

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30_04_14

SCRIPT DEV

Try not to get absorbed in making tools for their own sake... come back to making anims... it doesnt matter if I use existing tools..

- a pro of using a script might be to make it easy to deviate from an existing attr value (such as `polyExtrude.localRotateX = -25.2108`). so the script would establish a NORM or a BASE attr value from which to deviate.

-- be excellent to have a script to create either expression or node setup that allows for current value (eg in `polySplit.edge[0]` and multiplies that by the control)

-- could I use the **anim expressions** to change edges etc?

Quotes from my sketchbook;

“Start with observation and work with suggestions from the medium” *At the moment I feel that this statement sums up my project impetus.*

“A leg can be shapely but not entirely deliberate[ly described]”

“Make in Maya what you see- this might be a shadow [rather than the object that casts it]” *On this point, I found the problem is how to end geo... what to do with the boundaries? Maybe this is where viewport BG comes in. Maybe start on mid grey. Or try using two colours like I do when painting (eg ultramarine blue and burnt sienna). Think about these forms much more as 2D colour compositions..*



IDEAS

-- someone on a bike... off a bike... pushing a bike

when pushing the bike it is something that obscures vision of the pusher's lower body

when riding, the bike choreographs the rider's body. could the wheels be indicated by changing the texture of the background?

GEO and TEXTURE

I'm thinking that these experiments could be developed through experiments with form and texture together.

THOUGHTS

WORKING WITH HISTORY- one aim of this project is to see whether its possible to **become attuned to working with deformer/ object history**.. to model (as well as texture and animate) in a way that allows input from teh software (but not "clicheed input- *need to expand on what I mean by this*).

ARM project - could make the same arm many times in different ways... using different tools. presumably each different way of making would present different animation opportunities... different specific arm characteristics might emerge.

- as I model I hook up attrs to a controller and slide through the cntrl to see results of combinations of attr changes. (different to scrolling through one attr change at a time).

** This could also be a place to use my auto keyframe script -- this script is designed for looped animation but it could also be used for many types of driven animation I think --- its now based on the index of driver loop: could it be amended to be based on value of driver key? or would this just be assuming a driver loop of 0 ?

-- **polyExtrudeFace.keepfacesTogether** == interesting for hands and fingers

-- **polyExtrudeFace.localTranslate X,Y,Z** == interesting for finger movement -- how to set this up so that the axes move in relation to one another?

--- can I rename history nodes? eg can I name polySplitRing to "sleeve"

QUESTIONS

Merg verts / distance --- how to alter the verts involved? I suppose the results would be like the SOuP plugins.

GINA - maybe use something similar to "closest point" script. this might entail a custom node

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01_05_14

DISCOVERIES - TECHNICAL

-- I can rename nodes (eg polSplit13)

To create an expression offset relation I could have a naming convention for each "child" geoChange node (eg. armPulse_001).

could I use my renamer to rename these nodes?

working with sublime text open and having a script file (or several) open while I would might be just as valid and useful as trying to package my code for multipurpose use in the form of UIs etc.

--- The point of this project is to find ways not to start with "a blank canvas", but rather to start with something and tweak that thing...eg I might animate the rig so that the "pointing finger" below looks good/convincing.

QUESTIONS

- what will happen when the arm is rigged and animated...

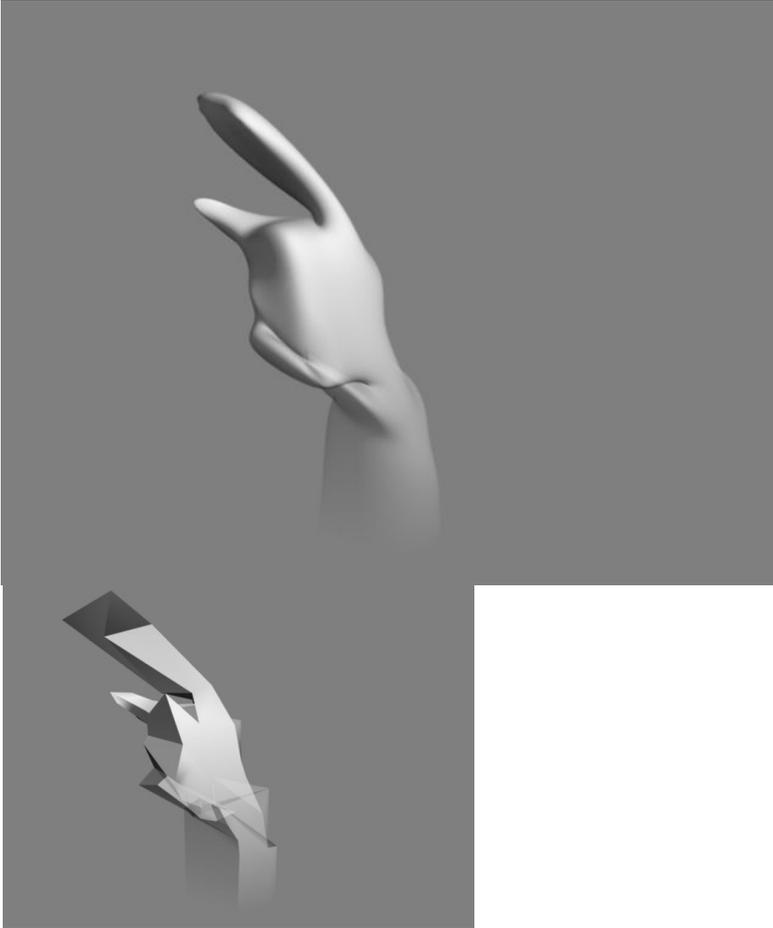
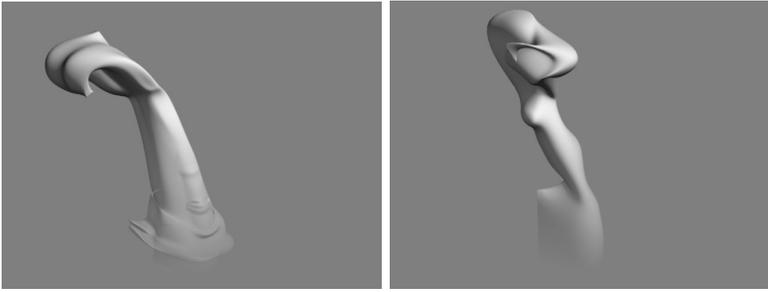
- can an interesting (narrative) animation emerge through play with the material qualities of the software?

NEXT STEP

- thinking now to add rig. - add head geo. - add some anim to arm

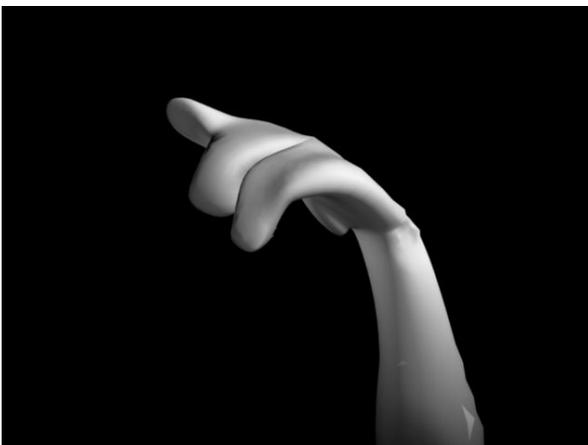
-- do another model with hand to chin ---how to transition from this hand model to the next??





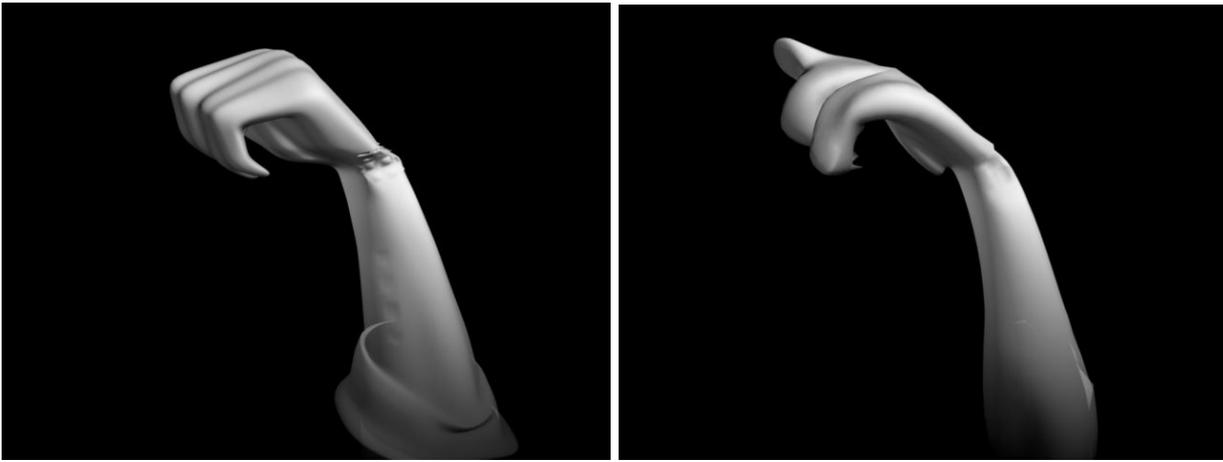
I really like this one because its reminiscent of a hand... a kind of impossible hand. maybe frozen but percieved moving quickly
⇒ armSpasm = 2.714936

Its not nearly so interesting when rendered low resolution; its not very hand-like.

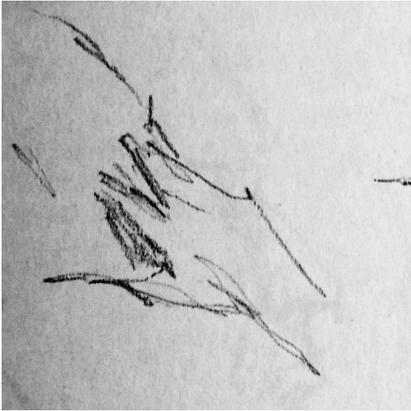


⇒ “extrudeFingers1.keefacesTogether” = Off

Maybe the point is not to animate transitions and trembling but to allow the tweaks to suggest other forms with which to work. Ie. what would it be like to rig this hand as it seems to be positions now?



Notice how tweaks done after the polysmooth node rupture the form when smooth reactivated...



Thinking about how to represent this pic... thinking that it could be one model and some verts are merged... as arm moves verts unmerge...

QUESTIONS

--can the areas where the sketch "peters out" (eg the back of this guys head) be adequately represented with low resolution geo (ie. low poly)?

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02_05_14



How to marry these two images together? the left hand looks better smoothed and the right one and head look better unsmoothed I think... Maybe do one smoothed version and one unsmoothed...

TODAY

Aim is to create something watchable (or a short series of watchable movs) from what I have done so far

- do short anim utilising both arms
- try with combined and uncombined head/hand
- render with various animated transitions/geo deformations
- render the anim with the form in different states.
- try different lighting and texturing options (...mabe a textured BG in comp or colour as light rendition)
- maybe try "big picture" structural elements... eg geo or sound... sound could deform geo or animated BG element
- could add fragments of other people... eg could duplicate this guy and render him in different states, changing the anim on each character to suit his new geo

1. is quite "straight" ⇒ animate and then add detail to head and RT arm...

-- just thought that he can look at his watch... watch could appear and disappear... (maybe Mas A) animation is taking too long and its feeling like a fairly "normal" workflow (ie a little tedious). Difference is that with partial models I think you "get away with more" ... ie, I dont think the animation has to be so good. I will now time limit myself to 30mins for animation (have already spent about 1 hour).

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06_05_14

About Using System events (ie conditions and events) and Script jobs;

http://download.autodesk.com/global/docs/maya2013/en_us/index.html?url=files/Creating_interfaces_Using_system_events_and_scriptJobs.htm.topicNumber=d30e709682

MAYA SCRIPT JOBS to record the modelling process... would it be interesting to model something moving? like sketching something moving? I have found that with sketching the results are sometimes more interesting when the form (often a human or animall figure or a moving object like a car etc) is moving rather than sitting stagnant in front of you (like a "still life"). I'm not sure why this is... But I wonder how this idea might translate into 3D modelling (and maybe texturing) practice...

I intend to explore SCRIPT JOBS to find ways of recording the process of creating a model (off the top of my head it seems that playing through a "behind the scenes" record of a modelling process might reveal a narrative or character that could be elaborated by the 3D artist [me]).

working out the syntax for using mc.scriptJob()...the following work;

mc.scriptJob(**event**=['SelectionChanged', 'mc.delete()'])

mc.scriptJob(**conditionTrue**=['timeChangeTemp', 'mc.polySphere()'], killWithScene=True)

to kill the job; **mc.scriptJob(kill=myJob)** OR **mc.scriptJob(killAll=True)**

to kill with UI element use **-parent** flag

I could use in conjunction with **mc.condition()** ⇒ This command creates a new named condition object whose true/false value is calculated by running a mel script. This new condition can then be used for dimming, or controlling other scripts, or whatever.

also **mc.isTrue()**... eg could use **mc.isTrue('SomethingSelected')** to make something happen after a certain number of selections..

BUT how to base the activity on system TIME

http://books.google.com.au/books?id=Bd-HKkbV8CsC&pg=PA10&lpg=PA10&dq=maya+scriptJob+after+elapsed+time&source=bl&ots=eBQr-CuLeX&sig=G6Gftc_YXussBr4h6XdtF3NcEw&hl=en&sa=X&ei=3jpoU_q5Ds7OkwX-o4CwDw&ved=0CCqQ6AEwAA#v=onepage&q=maya%20scriptJob%20after%20elapsed%20time&f=false

This guy says that timerX is like an internal stopwatch...

he suggests;

startTime = mc.timerX()

totalTime = mc.timerX(startTime=startTime)

maybe I could use elapsed time and selection in conjunction? Or maybe start time is the start of the script Job...

Found this autosave mel script on creative crash here;

http://www.creativecrash.com/maya/script/3867/download_page

I will try rebuilding in Python to learn some stuff.. also found these comments re this script;
"people use jobScript to set a RecentCommandChanged or SelectionChanged events, and check their timer on these events."
same forum is all about a **guys external timeLapse script**; he also has a youtube clip;

<http://forums.cgsociety.org/archive/index.php/t-1083659.html>

he uses the MEL match command. an example of what this does (from the maya docs); -

```
match "this" "this is a test";
```

```
// Result: this
```

He also uses CALLBACK... in line 258 he uses `commandName + "Callback"`

I dont know if I need this... will see... The Callback function seems to be his own function so it may not be needed...

-----REBUILDING AUTOSAVE SCRIPT----

he uses also `mc.optionVar()` which "allows you to set and query variables which are persistent between different invocations of Maya. These variables are stored as part of the preferences"

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07_05_14

Still working on autosave stuff...

wondering how to pass an argument with a function to Maya scriptJobs cmd...

```
self.myJob = mc.scriptJob(conditionTrue=['autoKeyframeState', self.checkTimer(10)], parent=self.mainColumn)
```

The above works but only without the 10.

Looking at his autosave script I think that he might use existing script Jobs to check the autosave... does that make sense? -- not sure about this

MAKE THE INTERVALS SLIDER ANIMATABLE?

- I'm using an intSliderGrp to set the autosave intervals. at teh moment it updates immediately when I adjust teh slider. Can I set keys or an expression on the slider (so that the saving intervals change throughout the work period)?

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08_05_14

Today will do a simple AutoProcedure script and example project (each developed in conjunction with the other).

I will start by modelling a simple object in front of me (I may texture it too...but I wont duplicate the shading network at this stage,,, I would prefer to apply the final shading network to all the models).

To start with the script will;

- duplicate the model

- put it in a group

- name it based on its timeStamp

- put visibility keyframes based on its timeStamp

My UI now provides a place to type in the procedure. This is cool cause use can change the procedure that is done throughout the session....

`eval()` seems to work

`.isdigit()` is handy

```
r = "456results string789"
```

```
s = ".join(x for x in r if x.isdigit())
```

```
print int(s)
456789
```

IDEAS for script functionality and use; encountered while working;

- history play had its limitations because once I add some more modelling nodes previous ones become unuseable... By duplicating models perhaps I can then hook up all nodes of a similar type to one controller (for example I could hook up all “**polyExtrudeFace.divisions**” to one control and all “**mergeVerices.tolerance**” to another... Perhaps UI where the controller and the node and the attribute are selected would be good...this UI could also provide keyframe or expression functionality.

```
.....
09_05_14  =>  10_05_14
```

MODELLING A CUP

the biggest issue I'm having is the script failing...

workaround would be to stop auto scriptJob and start it again...

However it would be better to fix the fail points...

Seems to fail on deleting faces...got this error;

```
# Warning: Object, 'cup67', skipped. It is already a child of the parent, 'duplicateMeshGrp'.
```

seems that sometime the new cup gets selected

-- another error is;

```
newModelParent is select -r pCube1 ;
```

```
????
```

currently it errors after;

```
>>>> nothing selected; job skipped
```

```
???
```

seems you can have nothing selected once but it fails the second time....is it trying to pass in a selection of a panel or something?

I may have fixed it by adding ‘**protected = True**’ and then (necessarilly) **force=True** to kill the SJ

```
---
```

```
autoProcedure_simplemodel_016.py --- script still failing
```

will check to see whether its something to do with the scriptJob event/condition or whether its the duplicateModel() script...

It may have been because of where I had the **return meshNumber** command... moved it now...try again

---hmmm---error as follows;

```
>>>> Performing function >>>> self.functionObject.duplicateModel()
currentSelection is [u'pCube1.e[290]', u'pCube1.e[292]', u'pCube1.e[294:295]']
currentSelection type is <type 'list'>
transformNode is [u'pCube1']
>>>> duplicating the model
newModelParent is None
newModelParent type is <type 'NoneType'>
```

added provision for if the parent of the new transform node is ‘NoneType’;

```
    if newModelParent == 'NoneType':
        print 'newModelParent newModelParent == NoneType'
```

... it seems to be more stable

hmm.... still seems to fail after;

```
>>>> duplicating the model
```

newModelParent is None
newModelParent type is <type 'NoneType'>

TEXTURING --

it captures the mesh with different UVs --- is there a script job for different UV changes???
OR maybe for now I just texture the cup and then apply the same shader to all models

ADD ability to execute script and also to save the shader with the model

QUESTIONS while making

BandW ramp → how to set alpha is luminance?? → I can do it on a file node
maybe `mc.setAttr("rampNode.alphaIsLuminance", 1)`

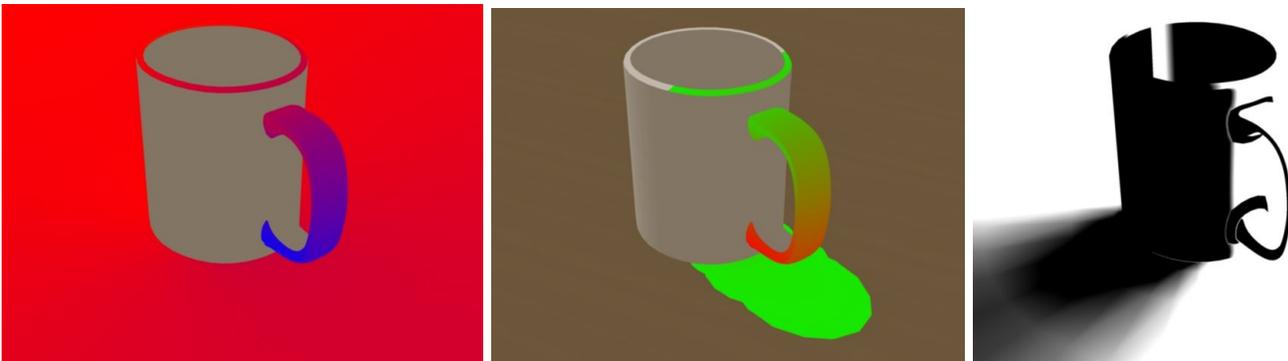
THOUGHTS while making →

duplicating the models is of course costly in terms of memory... theres a lot of mesh in the scene.
I wonder what could be "harnessed from these models? ie I guess they have shape and transform nodes now...
could they share transform nodes?
could they be stored as point information?
could they all be transferred somehow to the final mesh?

Research Outcomes --- The best case scenario (in my mind at the moment) for the research outcomes would be plugins that **contribute to a change in the 3D animation paradigm**... a change which encourages tools to be made that harness the process of making... that make the making process visible in the final piece... that expose the 'thinking while making' that goes on during production... that encourages the exploration of the "materiality" of 3D software (by this I mean all the things that 'push back' against ideal intention -- all the contingent aspects of practice) ... that encourage exploration of the making process as "collaboration".

To this end I feel that explicit outcomes such as **sharable plugin nodes** and/or **demo movies of nodes in use** (even if they are just prototype / proof of concept) would be more valuable than exhibition pieces (ie rendered footage).

Progress Pics -- Progress pics prove that different ways of working create different "mistakes", ie different unforeseen outcomes... the images evolve in a different way. I guess the best way to show this would be to work with the same subject matter in several different ways..



These pics show how the way that the geo is created (ie the topology and even more so the UV layout influences the way that the image emerges / or "takes shape".

→ - try these textures on the progress models---->

Q. → What are the differences and similarities between this process and my cup paint/sketch doe years ago with gouache?

A. → the images themselves emerge out of my perception of the cup... which qualities stand out to me.. how can I represent those qualities with the material (and tools) at hand. Then as I'm working with the tools/materials I'm looking at the image that emerges... what I like about it/ what strikes me might not be what I initially intended... I might not have to go that far...

This reminds me of Dianna Coole on MP ; she said something like ~ “its about emulation not representation”

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11_05_14

ADD TO SCRIPT -

- add **manual execute button** ---- (while the SJ is still going you can press a button and execute the script; will the mesh use the correct number?) - this will be particularly useful when the UVs have been changed
- **get rid of keyframe buttons**
- **save with shading network option** (alongside manual execute); maybe this one adds a flag of some sort so that I know not to add the original shader to it...

EXPLORE AND RENDER -

- animated ramp on progress models
- render from a different camera angle
- try the colour with a Lambert shader (so that its a type of hybrid shader).
- animate history as a whole
- deform all meshes (various deformers; transform component, joints)

SPECIFIC PROJECT IDEAS -

- **Nick's car**. open the door with a joint. perform door animation on preliminary model which doesn't yet have a door. Model the environment... texture at different times of the day... people passing
- **My dog**... lying in her basket... model her then maybe eventually put joints in her to animate all the meshes
- **trees or plants blowing in the wind**... model and maybe texture them... as I go; as I find the form... so that modelling is a way of exploring the form / a way of looking (Gina isn't it always?).
- **Plein air street scene** ... model what I can... capture what I can (I guess I would have to use my memory; eg of a person walking by). I guess all would be modelled at the centre of the... then they would appear

QUESTIONS

- **Philosophy** - what are the links between MP's emphasis on the **primacy of perception**; H's emphasis on human Being as always embedded and about **practical engagement** / coping (as opposed to an emphasis on

- **Texturing** - how to avoid lots of shading networks? I was just thinking that the easiest might be to start with a bunch of surface shaders (maybe with ramp swatches leading into them)... I model and select faces to add different colours to. I assume that assigning shaders at face level will involve Maya adding a groupParts node and that the component list will be saved with the model.

Palette script ⇒ Tools to enable application of shader to particular faces...

Colour Palette ⇒

- add swatch (adds swatch of default --- maybe the first--- colour or of the colour selected)
- delete swatch
- edit swatch (could be a button or double click)
- assign swatch → select faces and click on palette swatch >> assigns surface shader (which already exists) to the faces

-- toggle viewport colour

???--- could have some called *LIGHT* and some called *SHADE* --- then sliders for light intensity and light hue --- these sliders update all the swatches ---

Face Selection ⇒

--- save selection lists in a drop down menu

--- button to add to current selection list

=====> then later I can use the “select objects in shading group” to do different things with the faces across the board.

So this way doesnt sound like it relies on UVsbut we will see.....

thinking about smoothing --- shading on a per face level...perhaps best to subdivide (*polySmooth*) the models and then grow or shrink the component list associated with *componentList* for each shader

→ starting on teh colour swatch UI...useful cmds

mc.palettePort()

flags ⇒ **colorEditable == for current cell**

changeCommand

colorEdited

rgbValue

redraw

eg # select cell #30

cmds.palettePort('palette', edit=True, **setCurCell=30**)

return RGB value for this cell

cmds.palettePort('palette', query=True, rgb=True)

mc.grabColor()

grabs the colour under the cursor...

mc.colorEditor()

-----dont need these cause Maya automatically brings up the color picker :)

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12_05_14

// Create a Shading Group

string \$SG = `sets -renderable true -noSurfaceShader true -empty -name "mayaLogoSG";

// Connect the material to the Shading Group.

connectAttr -f (\$material + ".outColor") (\$SG + ".surfaceShader");

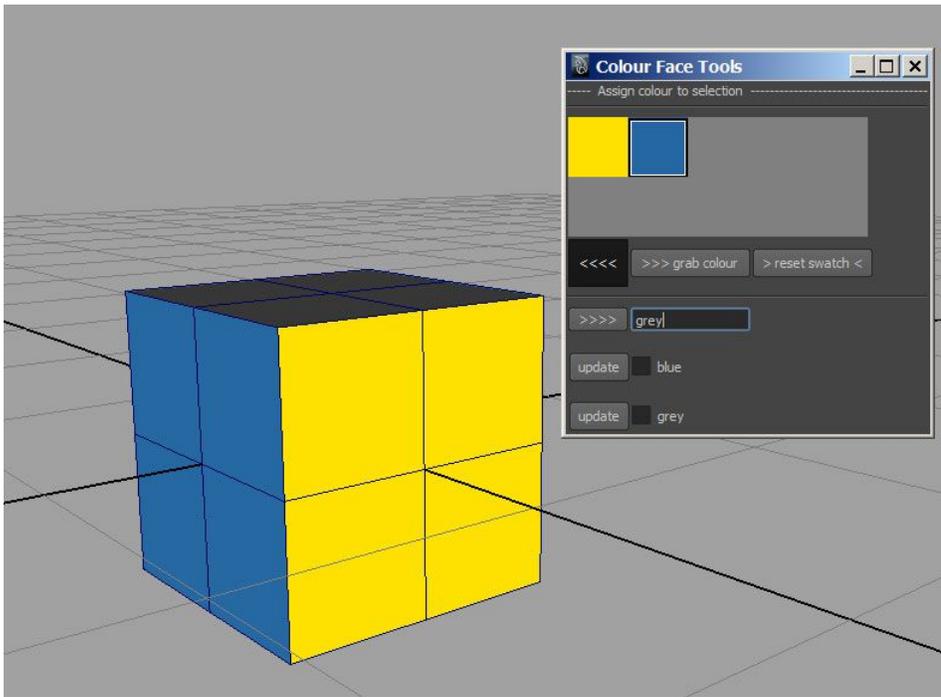
To determine which Material is associated to a Shading Group, get a list of all connection from the Material's ".outColor" attribute. Iterate this array to find all Shading Groups. The 'nodeType' command will identify a Shading Group with the string "shadingEngine"

PIC OF “colourPalette_008.py” UI

I just realised that it might be good to **automatically associate face selection sets with colour swatches.**

- automatically update selection set when a colour is assigned

- create colour swatch next to the selection set



- maybe update button clears the set and adds the members afresh; and takes members from other sets

So I make an automatic link between;

selectionSet → **swatchIndex** → **shader**

...so that each updates the other...

the **number of sets** ⇒ **the number of swatches** ⇒ **the number of shaders**

----- could I test this workflow first to see if it is interesting _____ ??????????????????

Useful ⇒ # Get a list of all the rendering sets which `coneShape1` belongs to:

```
cmds.listSets( type=1, object='coneShape1' )
```

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13_05_14

colour palette code fixes;

- create relationship between selection set and SGset
- update set colour button
- delete selection set (and its UI elements)
- when I edit colour swatch ; add reselect original selection... in fact I never really want to select the swatch
- update palette and selection groups according to SSs and selection sets already in the scene (by button or automatically on initialisation)

code queries;

- when assigning the swatch to the cube faces I get this warning;
- # Warning: Cannot add the following items to the set since the set has restrictions on membership: SScell_0 #
- ...seems to be trying to add the shader to the selection set

Thoughts;

when i update the topology its a different result depending whether there are more or less faces...
It would be good to find a way to suggest what Maya should do with new faces, ie what group to put them in...
First I guess I would need to have a stronger link between selection set and SGset
-- could the weird way that the colour jumps around on the cube actually inspire movement/ character/ animation/

and/or form?

- **Materiality**; on the one hand for me this term refers to the way that the software (inadvertently) behaves.. the aspects of it that are not part of its perceived functionality. For example the way that the coloured faced move over a polygon model as the topology of the model is changed... or the strange way that a model deforms when its topology or history is changed.

However I also seem to be seeking ways to control (or harness) this behaviour... is this a contradiction? Perhaps not... perhaps the key word is “harness”... or **explore the materiality of the software**

ASSIGNING A SG TO SELECTED FACES

found this link;

<http://ewertb.soundlinker.com/api/api.008.php>

can I **CONNECTATTR** to connect the shading grp set to the selection set??

- **creating an object selection set creates “groupid” node**

```
---> print mc.listAttr('groupid1')
```

```
>> [u'message', u'caching', u'isHistoricallyInteresting', u'nodeState', u'binMembership', u'groupid']
```

```
---> print mc.getAttr('groupid1.groupId')
```

```
>> 27
```

Gina it seems that when I create a selection set which includes mesh components Maya creates a **groupParts** node and a **groupid** node.... This is interesting cause **groupParts** is the node created by Shipkovs mel script (to change the history on a face extrusion for example).

By default does creating a face extrusion create a groupParts node? ii dont think so...

can i connect two componentList attrs? seems not

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SETS and GP nodes----

Have just been trying to see if I can have **one set that drives a selection set and also a shading GRP set....**

- havent found an easy way with cmds.

thinking it might be best to **work with faces as lists**

eg setting selection set members updates SG set members

and vice versa -- updating shading grp set members changes selection set members

It seems strange that I cant make these the same set

here is a link that shows how to add objects (and components to a shadingGroup using the API... its in C++ but might be useful when I come to make a node that connects **SG** and **selection set** and maybe **GroupParts component list...**

Also that **drives the component list or set membership with a bounding box....**

.....

14_05_14

beautiful day today - perfect for “plein air” 3D trial --

I would like to apply shaders as I go and also to save iterations of my model as I go...

I'm thinking of what I have written about as a painter's common aim being to focus on/ or represent the “overall impression” of a scene before it is broken down into component parts...

Right now I'm wondering how this aim relates to the ideas of Gestalt theorists and MPs ideas about perception (and maybe stuff he talks about in “the Structure of behaviour”.

focus on Gestalt / Perceptual experience

So in making a plein air 3D study I will be focusing on my perceptual experience of the scene...I will try not to necessarily break it down into component parts (treat the subject as I know it is; ie a collection of distinct

object)... My perceptual experience changes as my focus shifts and the lighting shifts and even the objects before me shift... in this way even an animation with static subject matter might be moving/changing/animating...

--- overall impression ---- shifting detail

listen to the materials / remain open to conversation

Allow strange use of tools to suggest content as I work

Also the software will suggest ways of moving from one model to another... or ways to treat / deform / texture all models.

My tools

save/ duplicate model script;

for now not auto -- just press button

it must duplicate connection to shaders

Colour swatch UI;

to help me quickly apply shaders to the emerging model

Maybe put these both in the same window

NB. I have continued this doc as pleinAir3D project notes



This pic shows a 700f sequence that combines plein air building and figure sketch “phoneFigure”

.....
16_05_14

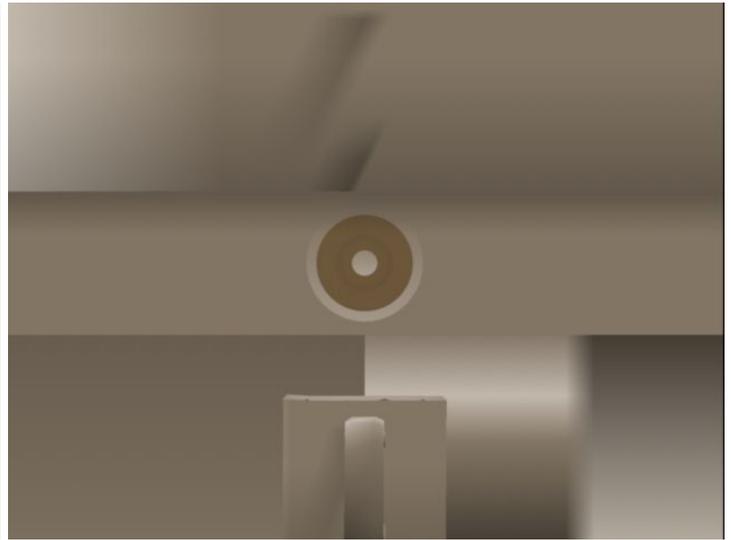
I will now try combining coffee cup and hands figure.

Try coffee cup ?and figure coloured.

Try them both Black and White.

Try adding a screen grab of the animating ramp texture? or visualising this somehow? but how??... maybe add a NURBS plane with the same shader...

--teturng coffee cup and wondering how I could capture this process of working/ tweaking/ texturing...for now duplicate the shader network? or save UV maps?



...based on lif study but then the image takes on a character of its own...

UV MAP REAL ESTATE

above right is image constructed of layered ramps. the area in the middle (brown) is the table top. it has much less room on the UV map than any other area and this is why the splodgy shadow occurs.

.....
17_05_14

WALK CYCLE

- using "RapidRig" for simple biped rig
- starting with a few main controls and creating a biped typical walkcycle (following tips of internet site;
<http://blog.digitaltutors.com/12-steps-to-a-great-walk-cycle/>)

I keyframed the following controls to get a basic walkcycle "framework"...

footL - ty, tz, rx, heelball

footR - ty, tz, rx, heelball (could these be done once then offset? in the past I have done so with an expression so that one foot drives another)

Root - tx, ty, tz, rx

AUTO ANIM for walkcycle

Questions;

can my auto anim script be use to generate basic walkcycles which I then build on?

Does working this way (with a few keys set down) all a character to emerge?

ie. does it feel different to tweak something already in place and listen for "believability", or "poignancy" rather than to work to a predefined goal?

Also, if the models are glitchy, dynamic, and incomplete, can I get away with more bizzare or "incorrect" walkcycle movement?

AUTO ANIM visibility of models

- autokeyframe

- child expressions

→ a quick test shows that this seems to work. The child delay = length of time that driver is visible. The driver is hidden for a length of time $VisLength * number\ of\ children$

-- why does there seem to be a limit to the number of children? is it to do with a limit in the no. of attributes I can add? test this by eliminating "offset" attribute --- it was the offset value ---

could amp increase be used for the distance apart of the keys?

OR would it be better to set something up so that the vis of one relies on the vis of the previous?
that might be a better way to get the spacing to vary across the timeline. Also to be able to move backwards and forwards.

→ Maya 2014 has a **LATTICE DEFORM KEYS TOOL ...**

Auto keframe script fixes / changes

→ offset (as a fractional number) as doesnt work for the last key in the loop... I guess it needs to get the next key ...??

→ it works for driver loop 4 + target loop 4 (all except the last key)

but not when targetKeyIndex0 ref driverKeyIndex1,2,3 or 4

→ it seems to find the next key in the target loop not in the driver loop...???

⇒ maybe its to do with teh way it calculates key value???

⇒ is teh time correct?? check this first

-----AAAHHHH-----

trying a new tack.... once I have the time of the current key... maybe I use mc.keyframe() functions to calculate the time of the next key...

eg I could use;

indexValue = Query-only flag that returns an int for the key's index

index =

index of a key on an animCurve

----- TRY;

given a time and an animation channel;

find the key index then the time of key[index+1]

→ `index = mc.keyframe('pSphere1.ty', time=(1,1), indexValue=True, query=True)`

`print index`

`i = index[0] + 1`

`print i`

`nextKeyTime = mc.keyframe('pSphere1.ty', index=(i,i), timeChange=True, query=True)`

`print nextKeyTime`

now it doesnt sem to be getting the keys to lay

GESTALT

interesting how Gestalt visuall perception theory emphasis **relationships** and **context** which is what my script are about (particularly animation scripts).

.....

19_05_14

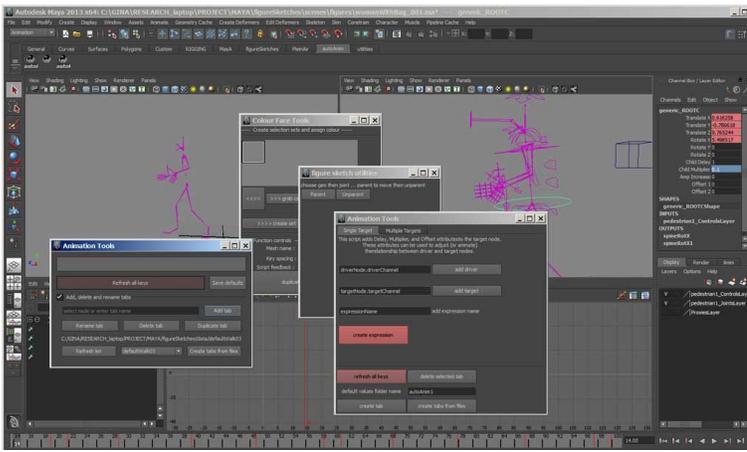
Using my autoKeyframe script (after having made some ammendments) to create walkcycles on rapid rig. It wasnt successful on whippet run but this to I want figures to be more abstract / sketchy ...

SCRIPT CHANGES

- How to optimize? maybe delete unnecessary print statements

---- call this one **AUTOKEYFRAME** and the other **CREATEEXPRESSION**

working on **WOMAN WITH BAG** using **"AutoAnimDev2_010.py"**



Using a number of my custom UIs

THOUGHTS

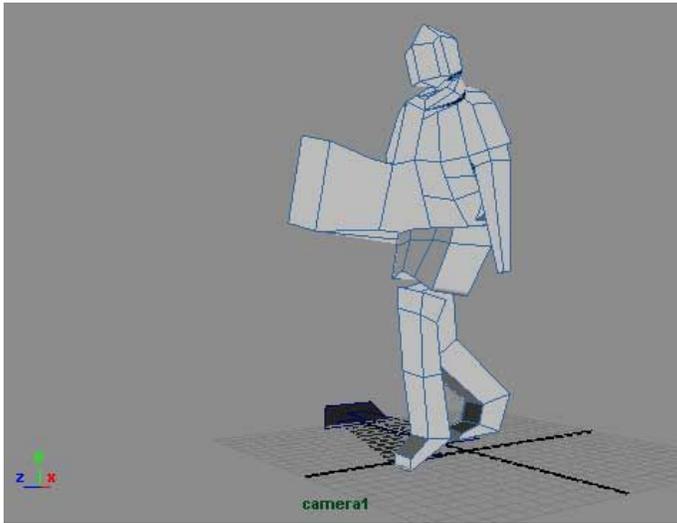
- AutoKey could be good for shadows etc
- I have noticed that the pose of the sketch is “incorrect” for a walk...ie her arm and leg are both forward ...is there a way of using my script (autokey) to aquire “incorrect” walkcycle movement that represents the perceptual experience of a walk?
- I just went out for a walk and noticed that no other pedestrians looked like a typical “walk cycle”. Some people swung their arms and had no up and down movement, other were teh opposite...
- NB. I have tweaked the keyframes from their default values to suit the exact pose of the sketch.
- could try shadows as animated GEO or use SHADOW PLAY script



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29_05_14

“GROUND ROUGHNESS”

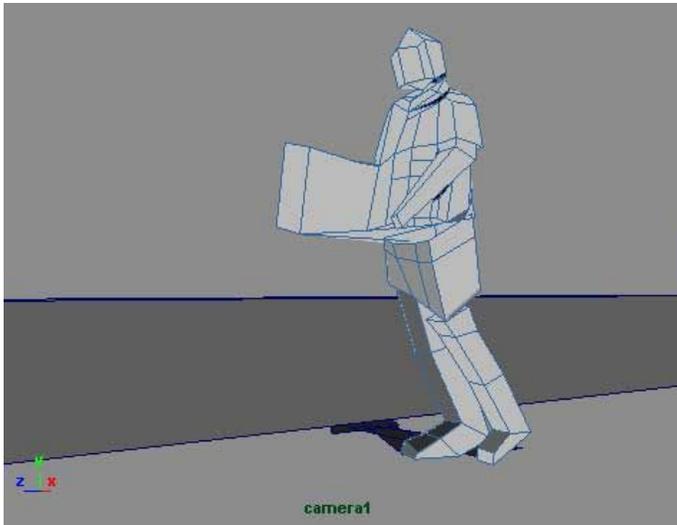
making the womans shadow with poly planes connected with constraints and clusters;
I put this expression on the shadow geo and thought that I could add a “ground roughness” attribute;
`pPlane6.translateX = generic_ROOTC.translateY * rand(2,2.5)`
increasing such an attribute would increase the random function making the shadow jitter...



A character emerges

I added a second expression based on her root cntrl and both expressions (one controlling spine ry and one controlling spine ry) are connected to teh child offset and mult attrs. this is a mistake but it actually seems to work fine... fiddling with this attribute gives her attitude or makes her slumped and tired...

A 1/3 increase in speed on the driver node '



RECORDING CHARACTER/ MOVEMENT ITERATIONS

...altering teh characters animation. But these iterations of her character are not being recorded..

Would it be interesting to save the keyframes as a trax editor segment and then blend them all together???

SHADOW GEO VIS

- an expression for shadow geo with an if statement...

```
if (pedestrian1_IShoulderJ.rotateY > 0)  
    shadowGeo.visibility = 1
```



General Thoughts on Digital sketching;

The screen is illuminated so can see colours for night sketching

Its 2D so can have blobs of colour (like the red in image 3) that almost hover in front of the object

tend to lay down a 'ground' colour and work from there

sensitivity to edge quality (blurry or sharp)

it has (surprising) intrinsic qualities such as blurry edged paint strokes then bucket fill of the same colour (image far right)

- RAE ST NIGHT SCENE -

AS a painter I usually start with a base colour.... sometimes its about blocking this base ('ground') colour in various ways... above digital sketches show the same thing

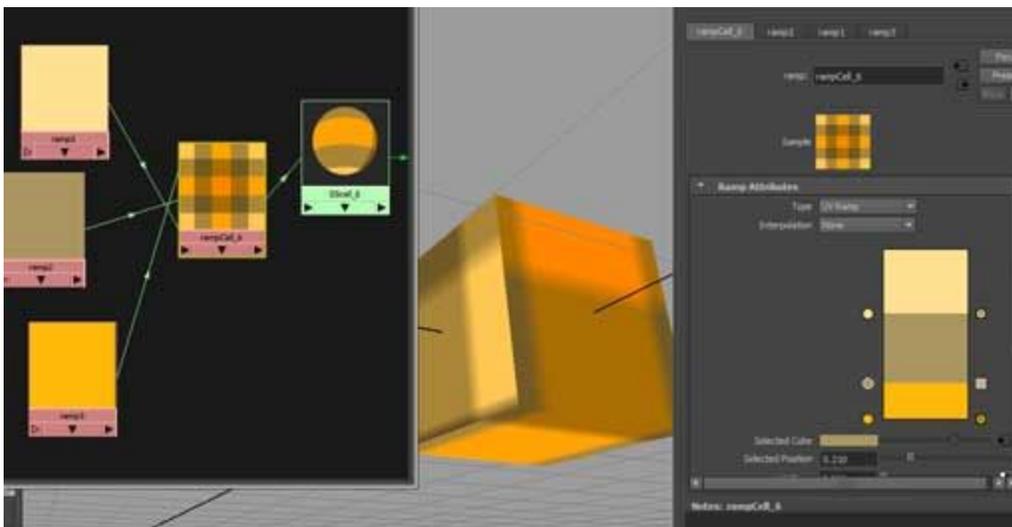
- start with BG colour ⇒ add this to colour tools

** ⇒ colour surface shaders via ramp

- dont use auto process but do record modelling process (via shape of transform)

- refrain from building/representing the st scene "as I know it to be"

** ----- RECORD COLOUR TWEAKS



Above shows a UV ramp type... can play with interp and ramp type for different transition between colour tweaks...

decided to record colour tweaks by adding a ramp switch to the main ramp..

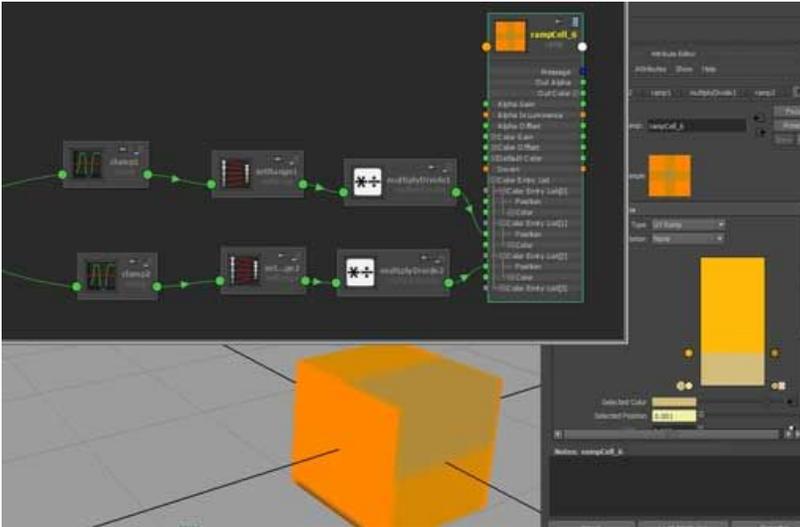
- the tweak number is the same as the colorEntryList number

- the interp type can initially be set to none

- the latest tweak is active when its down the bottom (ie tweak[1] is at position 0.001)

the latest is inactive when its at the top (position 1)
the first colour colorEntryList[0] stays at position 0

- link these the position of these colorEntryLists to a controller in PostProduction



I have decided to do this with nodes as pictured above.

CNTRL ⇒ clamp ⇒ setRange ⇒ colorEntryList[x].position

dont need multDivide unless I want finer cntrl

CNTRL is a float from 0 to numOfTweaks

numOfTweaks = number of colour entries (not including entry[0]; baseEntry)

entry0 stays at 0 (this is base colour)

entry1 moves from 0.999 (offPos) to 0.001 (onPos)

clamp → min0, max1

setRange → min0.999, max0.001, oldMin0, oldMax1

entry2 moves from 1 (offPos) to 0.002 (onPos)

clamp → min1, max2

setRange → min1, max0.002, oldMin1, oldMax2

movement range for both = $0.998 == 1 - (0.001 * \text{numOfTweaks})$

.....
22_06_14

more on **RECORD COLOUR TWEAKS...**

Production Tools;

tweaks to the swatch add an entry list to the ramp with a rampSwatch attached

startPos = $0.001 * \text{tweakNumber/indexNumber}$

Post Production Tools;

add controls for cycling through the colour tweaks

-add a tweak attr to the shader; float from 0 to n (numberOfTweaks)

----- got them all going from 1 to 0 at the correct range of tweakAttr -----

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23_06_14

- set correct entry range

- make one multDivide

DONE

- change cam threshold to AND not OR for subsume next cam
- tweak transparency tools for use with Surface Shader
- test cam anim and colour tweak scripts by doing a still life or life study
- set viewportBG colour

11_07_14

Thoughts re my project - glitches as aesthetic suggestions

been thinking about how my project is basically about using glitches as aesthetic suggestions. Its also about challenging teh habitual way that we see/look at/perceive things.

eg normally we "look through" the way objects appear to their use value. Van Gogh presents a pair of shoes and I suppose that we contemplate the shoes and see them in a new way...

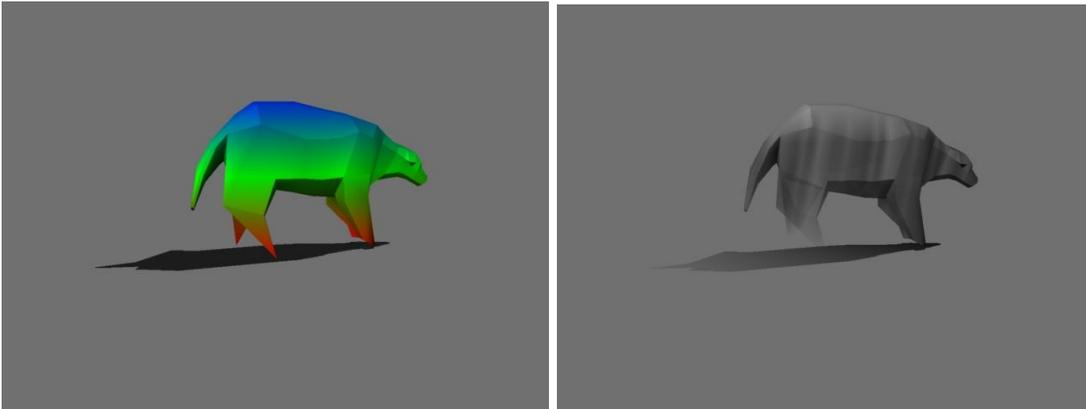
Interestingly this embeddedness/facticity is possibly what ensures that perceptual experience doesnt cohere with (or at least isnt limited by/ comprised of) the image ?projected onto/recieved by the retina. In other words I wonder if there is a paradox in me thinking that my work is about presenting ordinary objects in a new way, looking at them in ways that are beyond the habitual; and so I guess I dont want this just to be like approaching objects like a camera OR like Impressionists (or at least how Dreyfuss thinks of the Impressionists)...ie I dont want to approach them in a formulaic fashion. So its beyond the habitual (which means seeing objects as useful/ stable etc) but not necessarily divorcing perception from use value, meaning, cultural assumptions ect. Perhaps the point is that you never can... you can never stand back and make sense of it all.

BIKE MAN

OLD DOG → 2hrs

tolerance for the incomplete.... strategy #? == time limit

I have used the strategy of observational work (ie still life etc). Now try timelimit.



- after 2hs I have 1 ("finished") model and 70 process models.

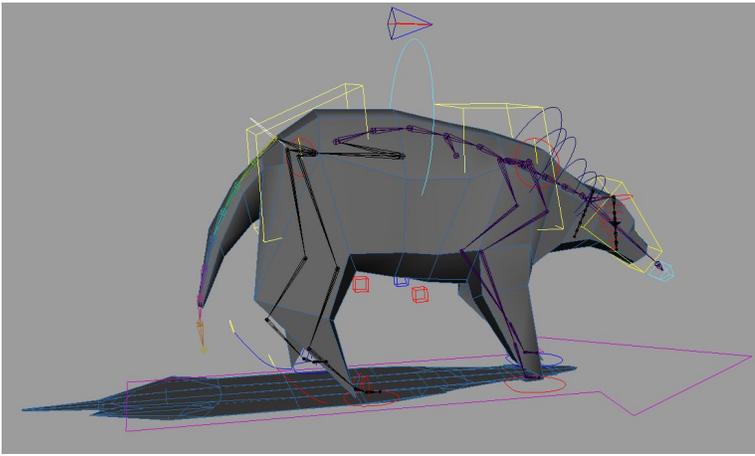
Next step is to;

- animate a walk cycle (sliding the main cntrl)
- bind all models to the joints (including shadow models which I want to include)
- add blend between each model and vis trail - I havent done this on bound / rigged mesh before...ie. I havent combined pleinAirStillLife workflows with MasA...

---- I just tried jumbling up the order of the models by using my renamer script

could make a random order script (duplicate my favourite shape or transform nodes and shuffle)

14_07_14



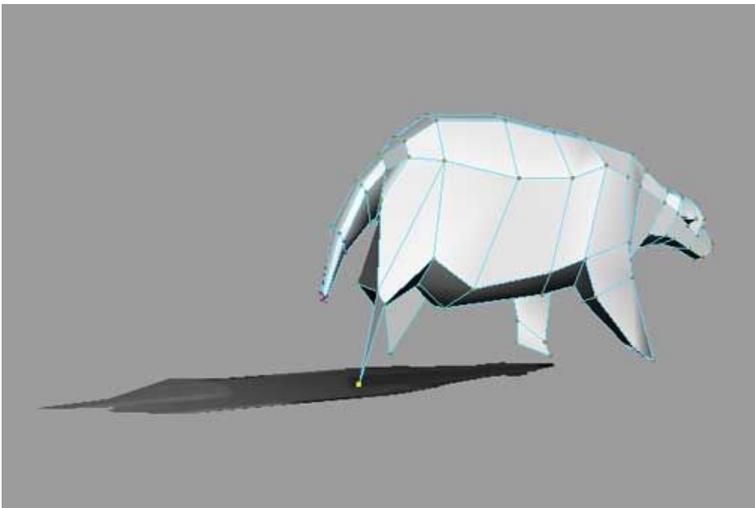
Move rig into position, to suit model (as closely as possible)...

Bind mesh (all of them?)

Create selection set of cntrls

key foot cntrls

→ I feel that I need ref material of dog walking..... <http://www.youtube.com/watch?v=xAJcQPoKv4>



when I added the toe to the skin weights and added weight teh mesh changed considerably. it turns itself inside out and pulls some of teh belly downward...

its more dynamic; over the top, exaggerated, but I quite like it...it suggests character...?

Because its a low res mesh the deformation is more radical/extreme/greater....

THOUGHTS

- I could use the same animation and just change the skinning to elicit a different character, a different model/form... maybe a group of dogs...

....

14_08_14

Back to still life cup and arm detail...



Rendering it with the models having different UVs then will run a script to transfer UVs from teh final model to the previous ones and render again

.....

25_10_15

WHIPPET SKETCH

working on grid
from sketches