

CS5245 Vision & Graphics for Special Effects Sem2 08/09

The Escape Door

Project Progress Update

by
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MORPHING

What has been done: Research on the different techniques of morphing was done to find the desired effect for the door knob. Our main idea is to create a realistic effect of a part of a wall being molded such that a door knob juts out of it. A turbulence effect was created in Maya to create the wavy effect when the wall is transforming to a door (Figure 1).

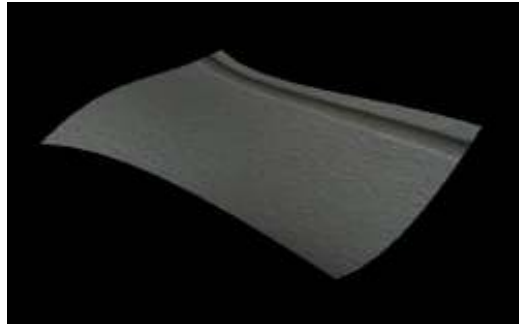


Figure 1: Turbulence effect

Following this effect, an open-source morphing application, WinMorph, was used to morph two videos of a wall. One is a clean plate while the other has a door knob on it (Figure 2).

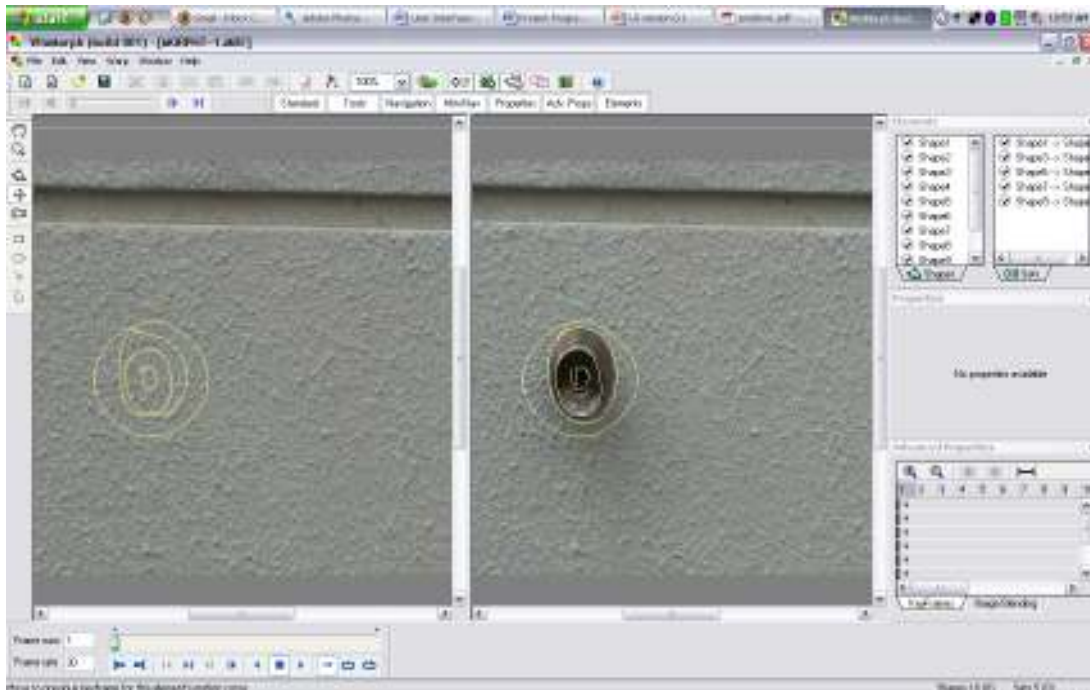


Figure 2: Morphing

Difficulties: There were some problems understanding the inner workings of the soft body effect in Maya to create the turbulence. With regards to combining the turbulence effect and morphing, the end result does not seem to be realistic enough. In other words, we have not yet achieved the jutting-out effect of the door knob.

What's left to be done: Multiple trial-and-errors need to be done to achieve a good turbulence effect of the wall being 'molded' to a door. We would also be trying the spring effect in Maya such that a rounded object (the door knob) is jutting out from the wall. Finally, the three techniques above have to be integrated smoothly.

DIGITAL DRAWING

What has been done: Based on the base video created from the filmed footage, an animation of the drawing of the door was created based on the movements of the pen in the actor's hand. An attempt was first made to create the animation using Blender (Figure 3), but a later test of creating the animation using Flash yielded better results (Figure 4).



Figure 3: Creating the path in Blender

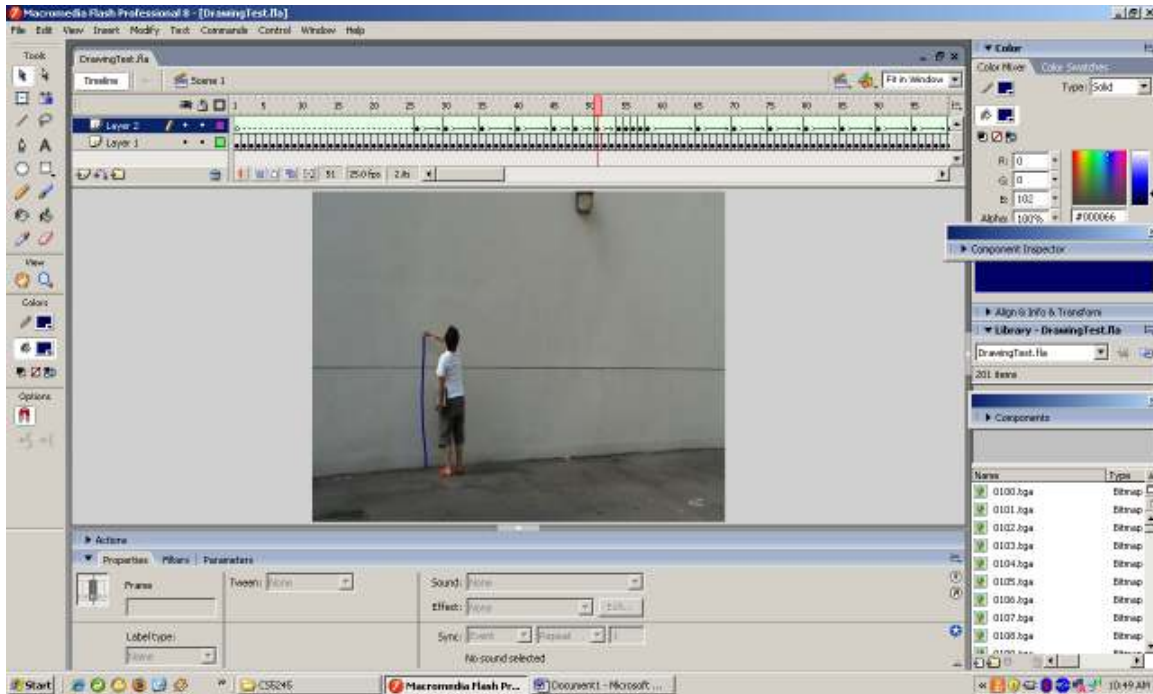


Figure 4: Creating the animation using Macromedia Flash 8

Difficulties: Due to the shot in question not having a good feature to track on the actor's marker pen, work on creating the animation has been based on approximating points from the video footage. Blender's interface also presented difficulties, as the methods to adjust parameters like animation speed were quite hard to understand. The use of Flash as the software for creating the animation alleviates this problem as the animation becomes easier to edit and change due to Flash's easier interface.

What's left to be done: Further touching up of the animation in Flash will be done to reduce the inconsistencies introduced by Flash's Shape Tween algorithm. The inability to do proper tracking leaves us unable to create a 3D model that can be re-used in later scenes, so a later scene showing the drawing on the wall at a different camera angle will have to be approximated using the door model created and the scene.

MODELING

What has been done:

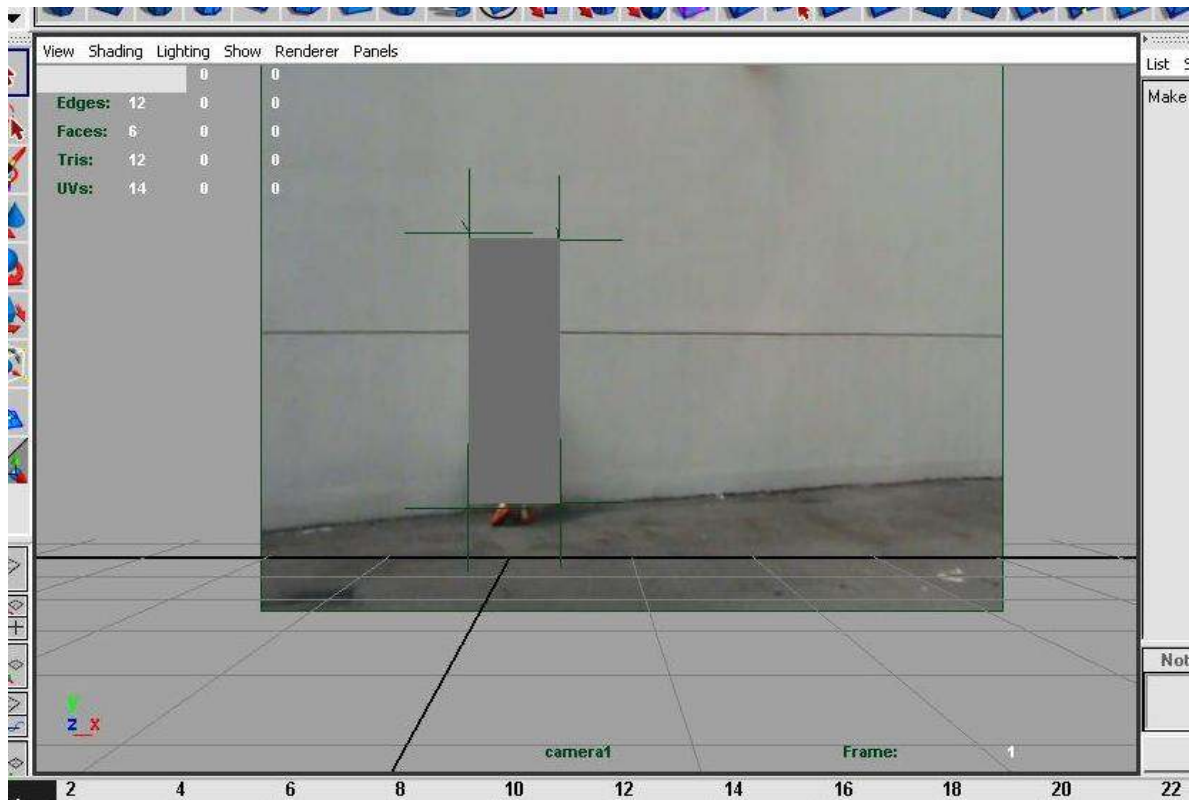


Figure 5: Placing locators

Based on the video that has been done, 4 images have been exported and placed onto an image plane in Maya one by one. 4 Locators are then placed based on the images and a cuboid was then drawn based on the 4 locators (Figure 5).

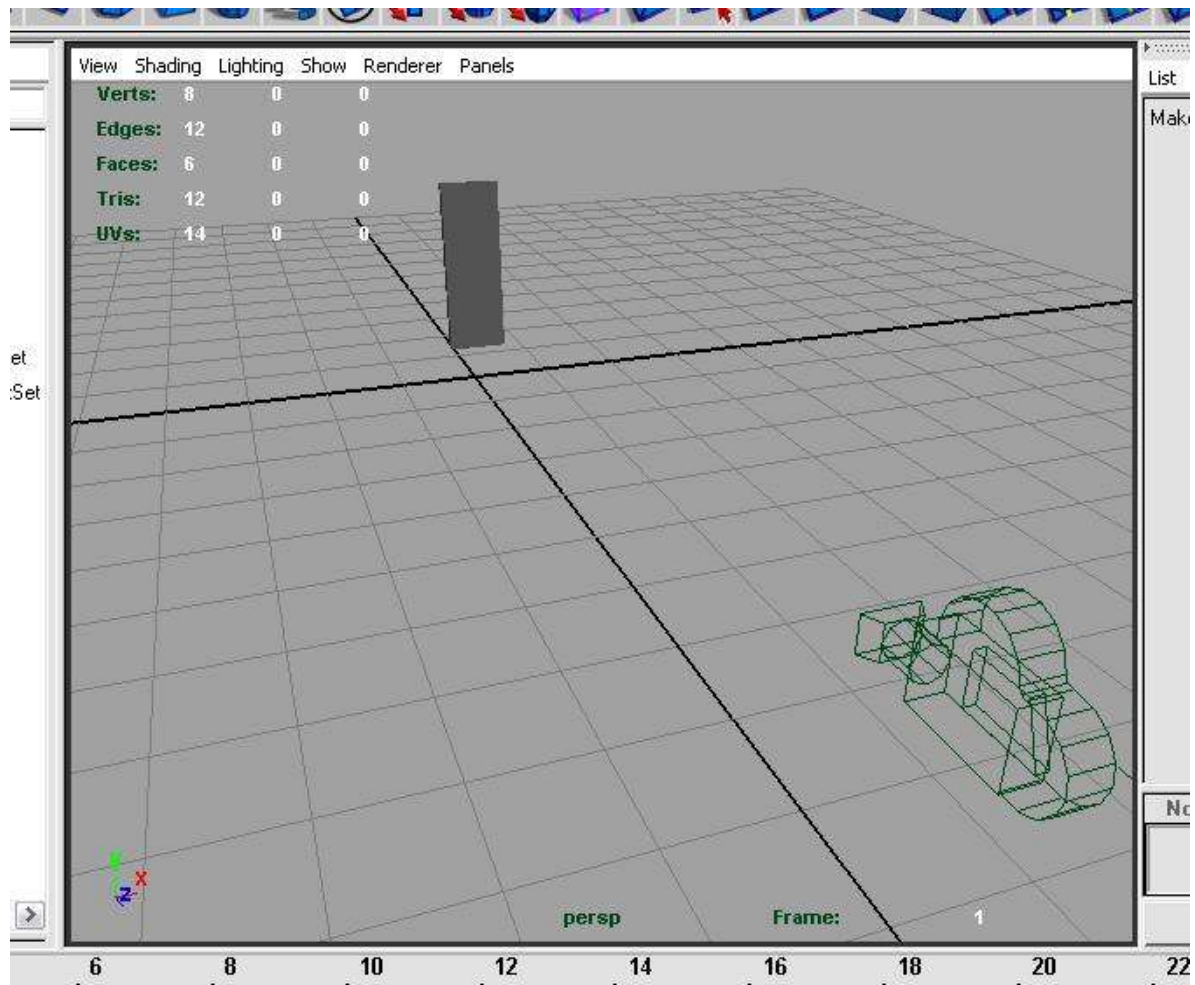


Figure 6: Modeling of door

From the cuboid, the shape of the door was modeled out (Figure 6).

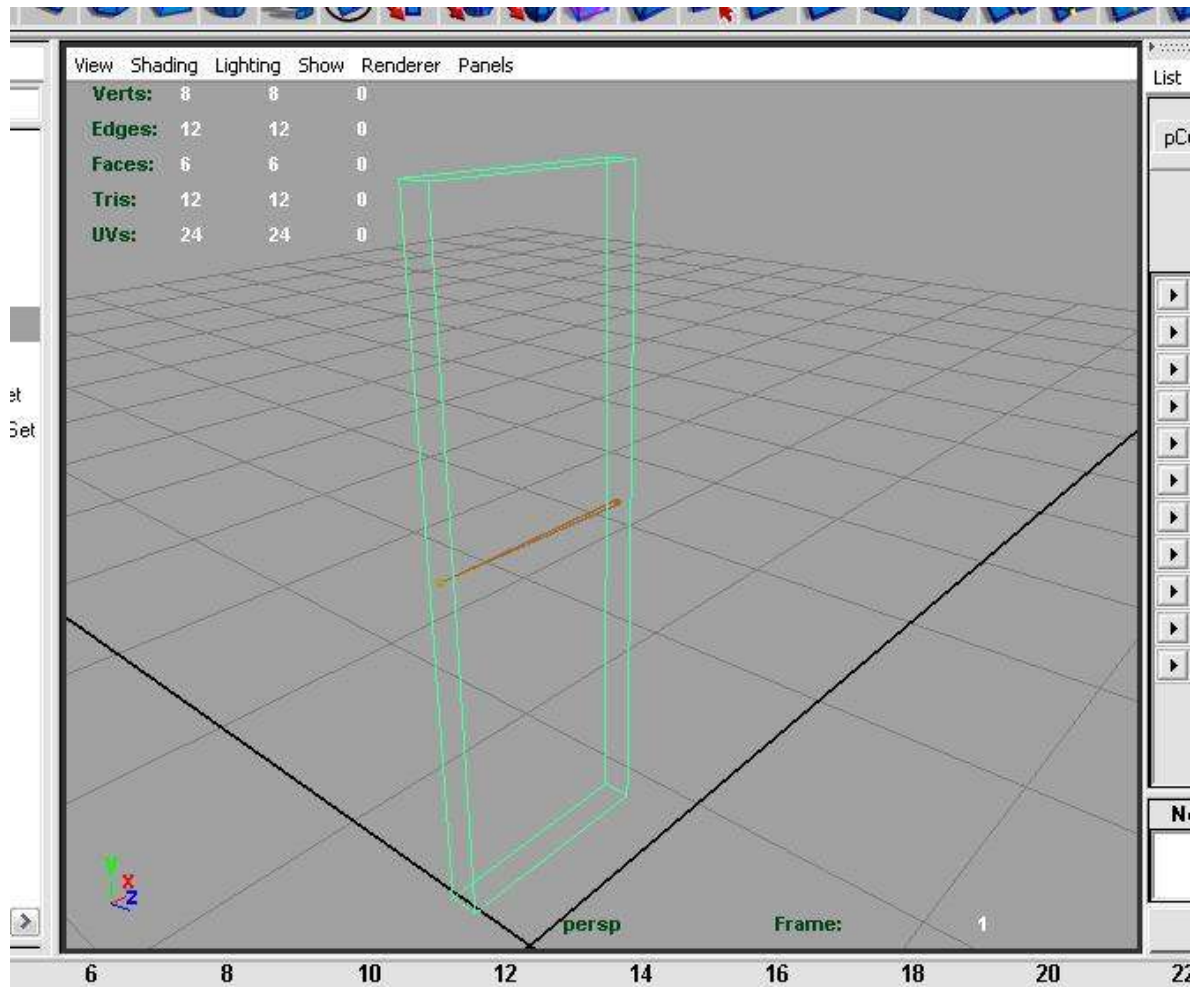


Figure 7: Adding skeleton joints

To make the door move, skeleton joints was added and bind to the door polygon (Figure 7).

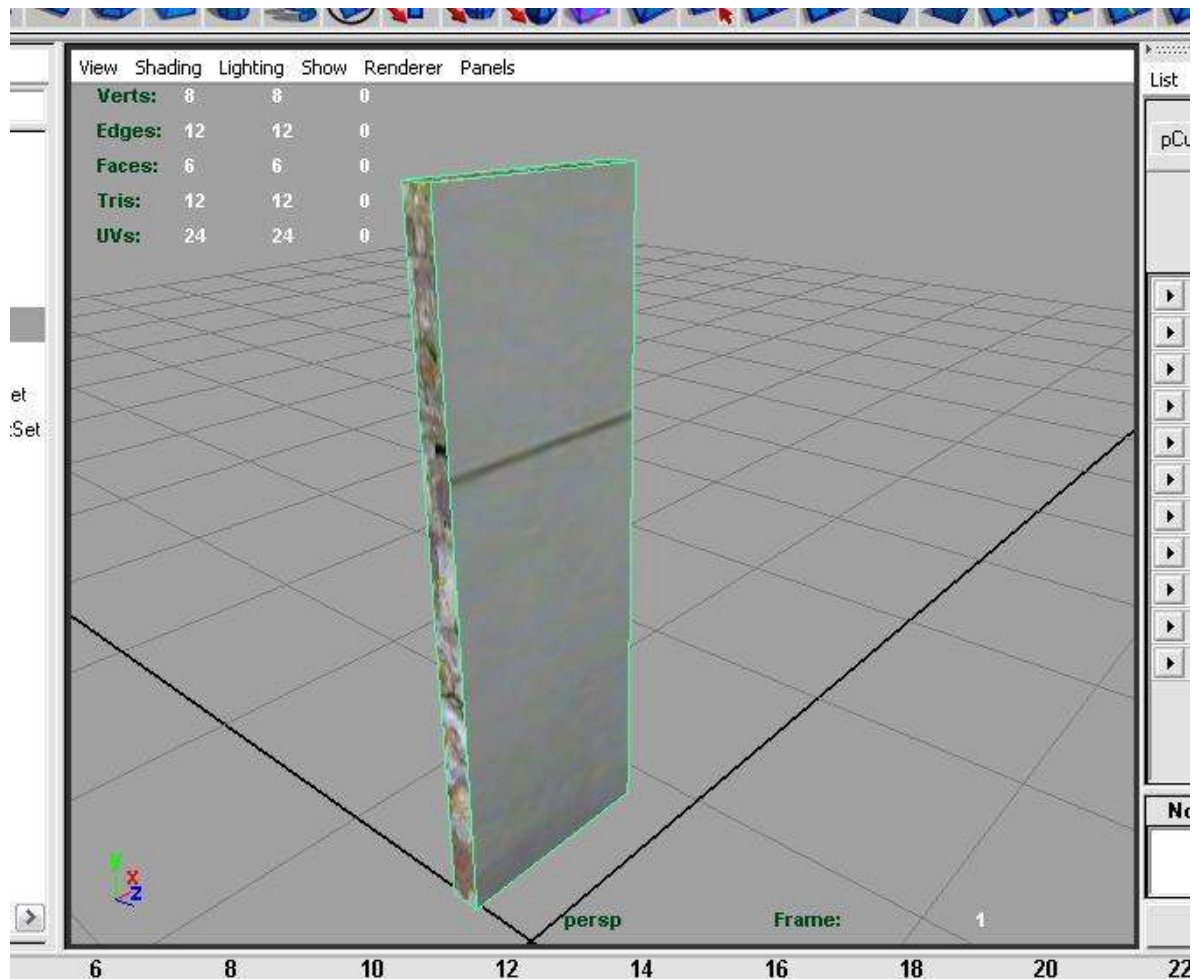


Figure 8: Texture mapping

A UV snapshot was done and textured mapped onto the model (Figure 8).

Difficulties:

One of the issues faced was finding the right texture for the cut portion of the door. Found one that seems to work nicely but I still find that it lacks a bit of realism.

Another was to find the correct image so that I could draw out the model to size. There was about 300 images just for the part of drawing the door.

What's left to be done:

- Finding a good texture for the cut portion of the door.
- Bump mapping so that the model will look more natural.
- Correct angle of camera view + size of door from that angle.

UPDATED PROJECT ROLES & SCHEDULE

Roles of team members

Kwan Peng Git Christopher	Compositing & Digital Drawing
Koh Choon How	Modeling & Animation
Suriana Bte Selamat	Compositing & Morphing
All	Making of... video

Schedule

Week 6	Proposal, Finding locations
Recess Week	Measurements, Logistics, Shooting
Week 7	Modeling of door, Morphing draft
Week 8	Digital drawing
Week 9	Animation, Spring Effect, Keying, Project Update
Week 10	Morphing Integration, Bump Mapping, Camera View, 1 st draft Compositing, Integration
Week 11	Editing, Narration of Making Of...
Week 12	Final editing
Week 13	Submission