CS 5245 Project Progress Update Report

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Title: "Super mouse"

Animation:

Models
The mouse is created, textured, animated and rendered using 3ds Max

We create a set of objects as props. These objects are key board, LCD screen, bottle and a teddy bear. The sizes of these objects and the relative position are used to reconstruct the virtual environment.

Shadow and Lighting
To create the more realistic final film, we have to put the correct and nature lighting and shadowing.

The real film footage is taken inside a room in the afternoon. There are some light sources, the sunlight and the room lamps. We use a parallel light source to simulate the sunlight, and put the spot lights to simulate the room lamp. To make the mouse "cast" shadow on the real desk surface, we created a virtual desk surface plane in 3ds Max, assign it a Matt/Shadow material so that in the rendering it doesn't show up but it receives the shadow and shows the shadow.

Match Move
In the film clip, the camera pans from one side to another side. The match move is done manually with measured camera angle and position.

Interaction between the virtual object and the real film

Some interactions between the 3D mouse and the real objects make the final film more interesting.

Bottle
The bottle is semi-transparent, so when the mouse jumps to it, the laser light shoots through bottle.

Keyboard
Mouse runs on the keyboard.

Bear
Mouse pushes the bear off the table.

The finalized story

1) A sunny day.

2) A mouse near the keyboard

3) Close-up shot of mouse.

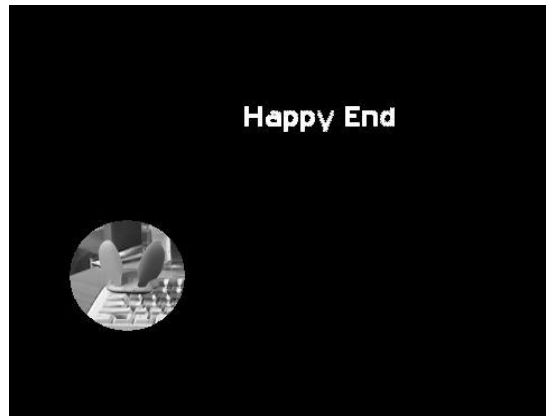4) Mouse becomes alive

5) Mouse starts to move

6) Mouse stands up and sees the bottle

7) Mouse jumps to the front of the bottle.

8) Mouse sees the cat and scared.

9) When mouse notices cat does not move. So it happily plays around.

10) Mouse goes to play with teddy bear.

11) Mouse knocks the teddy bear off.

12) A happy end