CS5245 Project Proposal - The Magic Glove

1 Tentative Title

The Magic Glove.

2 The Effect

We try to demonstrate a hi-tech presenting method without any projector, white board, pen, etc. There will be a semi-transparent "screen" floating in the air for the demonstrator to show something or draw something on.

3 What is the input?

We will shoot a presenting scenario with a demonstrator wearing a glove, he will pretend to manipulate the so called "screen" and write something on it. There will be a tracking point on the glove, thus the movement of hand can be easily obtained. In addition, a MAYA animation containing the movement and calligraphing effects based on the tracking path will be produced as another input. Moreover, the modelling in MAYA should be done according to the real dimensions of the scene.

4 What is the output?

The MAYA animation and the real scene will be compositted together with the help of an alpha mask. We will see a demonstrator using the glove to make the presentation.
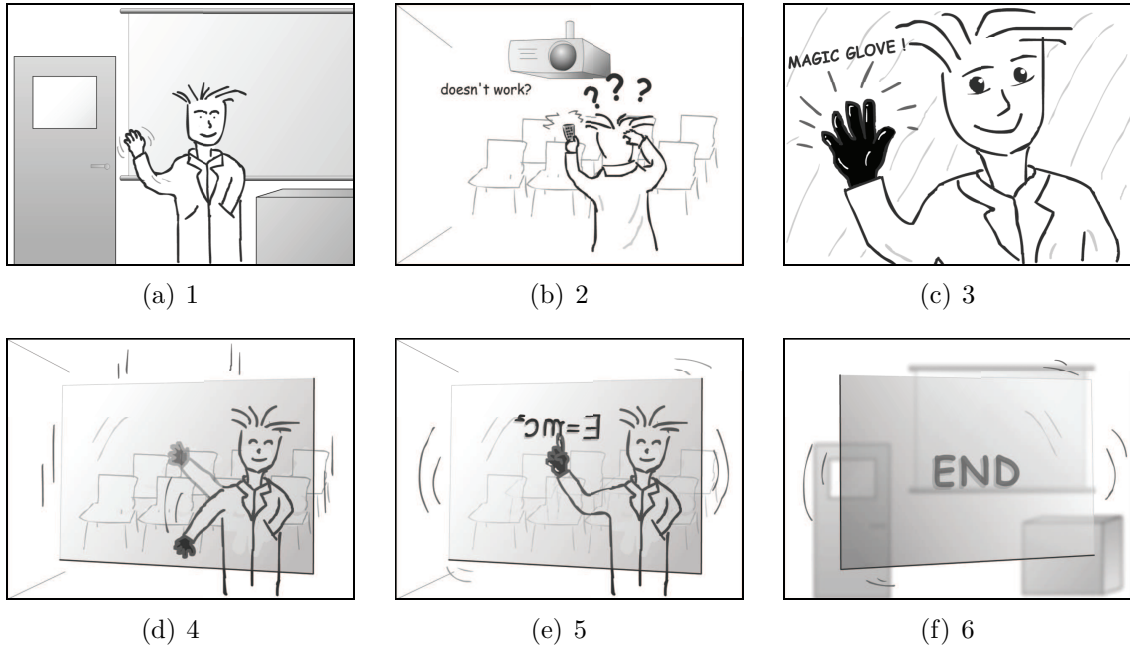
(a) 1 (b) 2 (c) 3

(d) 4 (e) 5 (f) 6

Figure 1: Story board

5 How many layers?

Basically two layers: the live shot and the MAYA generated "screen" animation.

6 Storyboard

1. At the beginning, a demonstrator enters the room.

2. He tries to use a projector to make a presentation, but the remote control is out of order. Then, he has to use white board and pen. Unfortunately, the pen runs out of ink.

3. He pulls a glove out of his pocket and wears it on, then turns back.

4. Suddenly, a virtual screen drops in front of him at his gesture. Some lovely pictures are displayed on that screen, which may not be expected by the demonstrator. He uses the glove to make gestures to change the screen. After several switches, he gets the right one.

5. He begins the presentation and writes something on that screen.

6. Finally, the presentation is over and the screen disappears at a puff.

7 Who will do what?

Proposal:
DING Feng, ZHANG Xiaopeng

Story board:
ZHANG Xiaopeng

Shooting(Props preparation & camera calibration):
Everyone

Get tracking path:
DING Feng

MAYA modelling:
SHAN Tao, DING Feng

Compositing:
Everyone

8 Tentative Time Line

Week 4: submit proposal, measure classroom
Week 5~6: MAYA modelling, shoot and clip footage
Week 7~9: Make special effect and composite
Week 10: Integrate and release
Week 11: Presentation