Project proposal sample

Overview

The subject of our animation will be a plane flying over an African desert. This will give us ample opportunity to experiment with lighting, shadows, background scaling, landscape stitching and motion effects. We have decided to build our animation purely in 2D since this will give each member in our group equal opportunity to contribute to the animation itself. The desert lends itself well to this sort of animation for several reasons. First, desert images, being fairly uniform, can easily be reused with minimal manipulation. This means that we can create more environment with fewer images. Also, a desert backdrop is conducive to dramatic lighting and shadows which should allow us great creative flexibility. Finally, because it is relatively flat, details on the ground should stand out well. This means that we should be better able to make the background as attractive as possible.

Tools

The primary tools, which we expect to use for this project, are Photoshop, Image Ready and Google. We will also explore the possibility of using Java 2D for some of our image processing in the event that Photoshop does not offer the flexibility that we require. By using these tools, rather than more programmatic ones, we will better be able to make a collaborative effort in developing our animation. Although Google will not play a part in our image processing or animation rendering, we expect that it will be the primary resource for acquiring the necessary images for the project.

Triage

Needs:

- **A plane**
  Although we have not decided on a specific model, we know that we will need multiple images of whatever model is finally chosen. We will need side, top, bottom and interior views to complete our animation. In particular, we will look for a pilots view from the cockpit of the plane.

- **Landscape**
  This will be many desert images stitched together and modified for texture. These images will likely be poor candidates for combining but we should be able to adjust colors and scales to improve this.

- **Shadows**
  Our plan is to generate shadows for objects using a series of filters and effects in photoshop. By using the outline of a given object, we should be able to adjust color, orientation and perspective to reasonably reproduce shadows.

- **Landmarks**
  These will be extracted from existing images and scaled to fit into our landscape. This will likely involve some correction of lighting and shadows on the landmarks themselves in order to blend with
the surroundings.

- **Clouds**
  In order to show the plane moving through the sky, we need points of reference. These could easily be cut out of images and dropped into our animation, but we will also look into using Photoshop effects to create our clouds.

**Wants:**

- **Varied camera angles**
  To make our animation more interesting to watch, it would be nice if the 'camera' shifted position to give a varied sense of the environment. This would also break our animation up into several smaller animations.

- **Varied Environment**
  We could also have different types of terrain for our plane to fly over. Perhaps it flies over the desert until it reaches a city. This, again, would make the animation a little more interesting to watch.

- **Skydiver**
  We have discussed the possibility of including a sky diving sequence in our animation. This would give us the opportunity to drastically change the perspective and direction of movement in the animation. Our thoughts are that we could see through the eyes of the skydiver as he/she approaches the airplane door and then jumps out.

- **Wildlife**
  This would give a moving points of interest on the ground. Seen from the plane, these would have little detail and would, therefore, not require detailed animation. This could be a good bang for our buck as it gives life to our environment.

- **Reflections**
  As the plane flies over and by reflective surfaces, we could see a warped image of the plane moving over the surface. While visually appealing, the textures of these surfaces could prove to be difficult to work with.

**Time line**

We have split up what we believe are primary points of research for our project.

- Rendering shadows in 2D
- Rendering distance/scaling in 2D
- Stitching and seam reducing techniques
- Creating the illusion of motion from still images

This research is currently as far as our time line goes. Each of us has been assigned a topic and will report back to the group on Monday Feb 26.