CS5245 Graphics & Vision for Special Effects
Project Progress Update 1

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Project Updates and Changes

1. **Title:** ***The Impossible Magician***

2. **The Effect: Human creates new flow of high waterfall**

Approach:
This idea was inspired by Bhat's work [1] that presents a novel algorithm for synthesizing and editing the flow of natural phenomena with continuous flow patterns such as waterfall, fire and smoke.

To achieve the above effect, we need to take the following steps:

1. Take a video sequence of a high waterfall with a human acting like a magician to create new flow of waterfall to the real existing waterfall. The targeted waterfall is Lata Kijang (Figure 1), which is approximately 350 feet high, and it is the tallest single drop fall in Malaysia

Figure 1: Lata Kijang

2. Implement Bhat's algorithm to add new flow of waterfall to the high waterfall. Water texture of the new waterfall flow is taken from another waterfall video sequence
3. Creates twinkle visual effects using Adobe After Effects, to be added to the video sequence as the magician lifted his hands to create the new waterfall flow
4. Composite the effect to the video sequence

3. The Input

i. A video sequence of a high water fall with human acting like magician
ii. Twinkle Effects using particles modeling effect.

4. The Output

A composite video with the final effect of a magician creating new flow of waterfall

5. The Schedule

Week	Milestone
Week 5	Proposal approval and consultation
Week 6-7	Shooting & Implementation of Bhat's algorithm
Week 8	Progress update
Week 8-10	Editing & Compositing Application of Bhat's algorithm
Week 9-11	Model twinkle effect and video compositing
Week 11	Progress update
Week 12	Finalizing & Presentation preparation
Week 13	Presentation

6. Project Progress

The team has taken video of the waterfall in Malaysia. The team has started with the implementation of the algorithm to synthesize and edit the waterfall. To date, we have completed the user interface to input the flow line of existing waterfall and for the new waterfall. Currently, we are working on the algorithm to synthesize a new waterfall based on input flow line of an existing waterfall. Once we have completed the waterfall synthesis part, we will look into the algorithm to edit the flow of the waterfall. At the same time, the team is also creating the twinkle visual effect for the magician.

7. Problems encountered

We encounter problems in determining the right camera angle when taking the video. This is important in implementing the algorithm to achieve great quality of visual effect. The team also encounters difficulties in being unfamiliar with the visual effect softwares and MatLab.

8. Solutions to problems

We have to reshoot the video again when we have found out the correct camera angle based on the first video shot, as well as to familiarize ourselves to the softwares as we do the project