CS5245 Graphics & Vision for Special Effects
Project Proposal

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1. **Title:** *The Impossible Slide*

2. **The Effect**

   Human sliding down a 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 the high 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.
   2. Take a video sequence of a human sliding down a much lower waterfall (Figure 2: Gabai Waterfall).

Figure 1: Lata Kijang   Figure 2: Gabai Waterfall

   3. Implement Bhat's algorithm to edit the flow of the waterfall to make it wider and less steep so that the human sliding down blends seamlessly with the waterfall and it looks natural.
   4. Composite these two video sequences and integrate the composite video sequence with water splashing effects to make it realistic.

3. The Input

i.   A video sequence of a high water fall.
ii. A video sequence of a human sliding down a low waterfall.
iii. Water Splashing Effects using particles modeling.

4. The Output

A composed video with the final effect of a human sliding down a high waterfall.

5. The Storyboard and Storyline

A person goes to a small height waterfall
and decides to slide down

Then he slowly slides down the waterfall.

As he slides down he dreams ….

…. about sliding down a very high
waterfall and the crowd is cheering him…

His dream is shattered and he's suddenly awoken when he hits the floor of the low waterfall!!

6. The Roles

Tasks	Chandra	Danny	Lai Kuan
Shooting	X	X	X
Implementation of Bhat's algorithm		X	X
Modeling of water splashing effect	X		X
Editing & Compositing	X	X	
CG Integration	X	X	X
Sound Effect	X	X	X

6. 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 water splashing effect CG Integration
Week 11	Progress update
Week 12	Finalizing & Presentation preparation
Week 13	Presentation

Reference:

[1] K. Bhat, S. Seitz, J. Hodgins, and P. Khosla, "Flow-based video synthesis and editing," *ACM Transaction on. Graphics*, vol. 23, no. 3, pp. 360–363, 2004.