Comp Photography (Spring 2015)
HW 11

Jonathan Hudgins

Looping Video

The candle start and end frames look very close, as do the fan frames. However, when watching the candle gif there is a noticeable skip at the loop point. The fan gif not only has a skip, but also has a clear shift in the lighting at the loop point.

Candle Start
(frame 37)

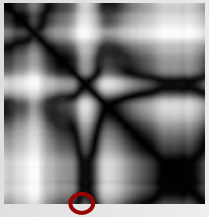
Candle End
(frame 89)

Perhaps the lighting changed because of the camera or some wobble in the fan or some phase in the lightbulbs.

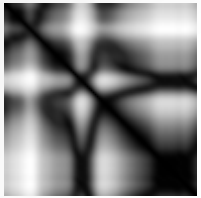
Fan Start (frame 23)

Fan End (frame 79)

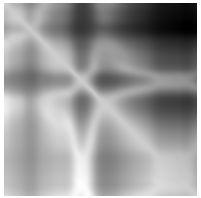
Candle Difference Matrices



candle ssd diff



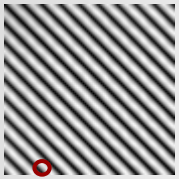
candle transition diff



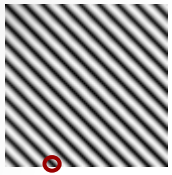
candle frame-compensated diff

There are some nice long black contours ending at the middle of the bottom edge. The best solutions are going to be those furthest from the diagonal. And indeed the red circle represents the frames calculated for the candle animation (start 37, end 89)

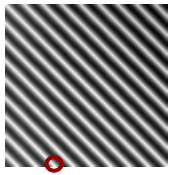
Fan Difference Matrices



fan ssd diff



fan transition diff



fan frame-compensated diff

The stripes demonstrate that this is a cyclical mechanism at work. At first glance it would appear that the lower left corner would be the best candidate for a frame transition. However when zoomed in it is clear that the third black stripe from the lower left corner has the strongest values farthest away from the diagonal.

Alpha: Frame-Compensating Differences

I tried a variety of alphas when compensating for frame distances. Dropping alpha to $0.5 * 10^6$ resulted in only one frame and increasing it to $3.0 * 10^6$ resulted in the entire set of frames. Values in between were marginally better, but $1.5 * 10^6$ seemed to yield the best results.