CS5245 Special Effect Project

the special Mahjong Player

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Story

- 4 people are playing mahjong. When it's Justin's turn, he realized he has a bad hand. Then he waved his finger across his set of tiles, and the bad tiles gradually changed to the winning hand.

Effect

- Main Effect:
  - The fluid effect on the texture of the mahjong tiles.
  - Flowing from the bad hand to the winning hand.

How to achieve the effect

- Using Fluid Solver to generate two sequence of distorted images, the bad hand and the winning hand.

- Morphing the last image in the bad set into the last image in the winning set.

- Composite the forwarding bad sequence, the morphing sequence and the reversing winning sequence together to make the flowing effect.

Fluid Solver

- The "Fluid Solver" source code is from Jos Stam

  http://www.dgp.toronto.edu/~stam/reality/Research/pub.html

  http://jgt.akpeters.com/papers/Stam01/

- Fluid Solver mainly for simulating fluid effect, such as smoke. Accept density image only.

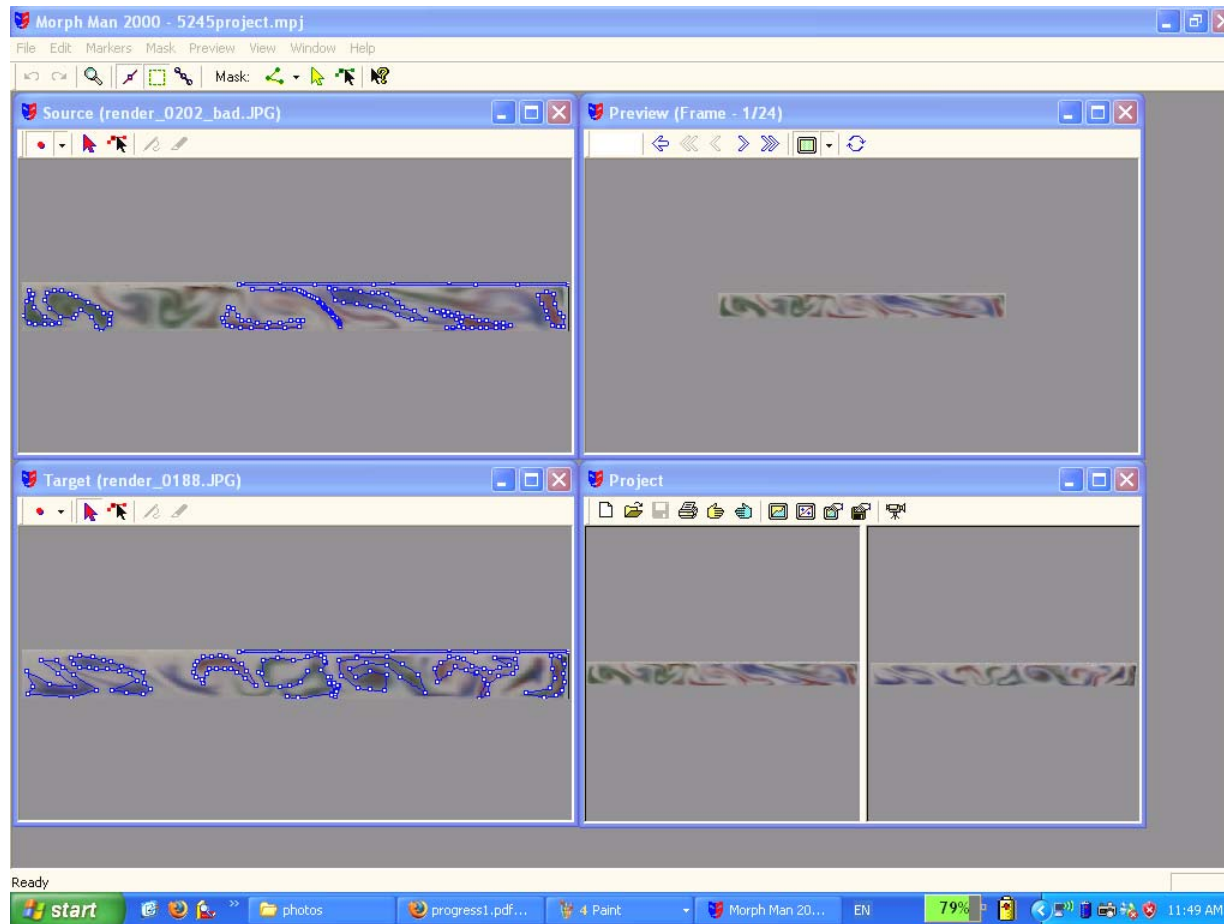- Custom write the solver to make it applicable to images.

Morphing

- MorphMan2000

  http://www.stoik.com/products/morphman/mm1_main.htm

- Morph two images and generate a sequence of intermediate images.

- Sequence of images are inserted into video

Morphing

- Match the shape and color in the similar positions.
- The sequence of intermediate images showing changes are generated.

Compositing

- Carefully extract the scene and composite the sequence of image into the raw footage.