

Context:

We examined soap films using various sized impliments for creating soap films. We were looking to see how surface motion, light refraction and internal air motion could be observed on and in soap films.

Apparatus:

White cloth draped over wall and countertop 8' wide and 6' down. 1200 Watts of light behind a silk flag provided a diffuse light source. Soap was Palmolive dish soap mixed with a little water in a square wash tub. We used a 2" x 4" copper pipe, a 10" x 6" plastic ring and a small funnel as sources to generate films (flat surface soap film) and bubbles. A beaker with water and dry ice provided water fog and motive power to generate some of the films.

Visualization Technique:

Using a Sony HDV camera, I recorded each of the experiments we attempted. The shots were captured both from a tripod and handheld, from 3' to 8'. The experiemnts were captured from various angles (as was best suited to the light).

The experiments included:

- ❖ Dipping the large plastic ring in the solution of dishsoap and water, then holding the ring up to the light until the film broke.
- ❖ Dipping the ring in the solution and drawing the ring through the air to create a film stream.
- ❖ Dipping the ring in the solution, holding the ring level and blowing down to create a distorted film.
- ❖ Putting the copper pipe into the square wash tub of dishsoap and water, and dropping a piece of dry ice into the pipe.
- ❖ Setting a beaker of saline and dry ice on the table, dipping the small end of a funnel in the solution and placing the wide end of the funnel over the beaker.

Photo Technique:

Field of View: 10" wide

Distance: 3' – 8'

Focal Length: Various (Telephoto)

Camera: Sony HVX – HDV Camera

Settings: F2.8, 1/60th (@ 2 fields)

Processing: Video footage was edited to show the best results from each experiement. No image processing was used in the Post-Production. The final video was encoded as a QuickTime H.264 video file for easy distribution.

Summary:

This was both an experiement in image-technique as much as a first chance to work with a team of people. The use of our combined talents made the workflow very efficient. With some focusing on the techniques of generating films and bibbles, others looked at the chemistry or physics to provide the best combination of materials to work with, and I was able to focus on lighting and background elements. It was a strangely well structured group with very little need for management or directions, once we got started with the

experiments. Interpersonally we had no difficulties, and each of us were able to focus on getting images with our equipment.