

6.111 Final Project Proposal

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Realtime Light-Saber Generator

This project will implement a realtime video special effect. Live video of a person will be displayed such that it will appear as if the person is holding a light-saber in one hand.

The person will be holding a colored marker with an embedded accelerometer or gyroscope. The origin of the light-saber will be detected from video input (detecting the colored marker), and the angle and length of the light-saber will be computed using input values from the accelerometer or gyroscope in the person's hand. The pixels composing the light-saber will be printed over the live video input, which will be directly output to a monitor. Hence, this is a realtime special effect generator.

Additional features may include sound based on light-saber movement and realistic visual quality of the light-saber (width according to distance, shading, etc.).