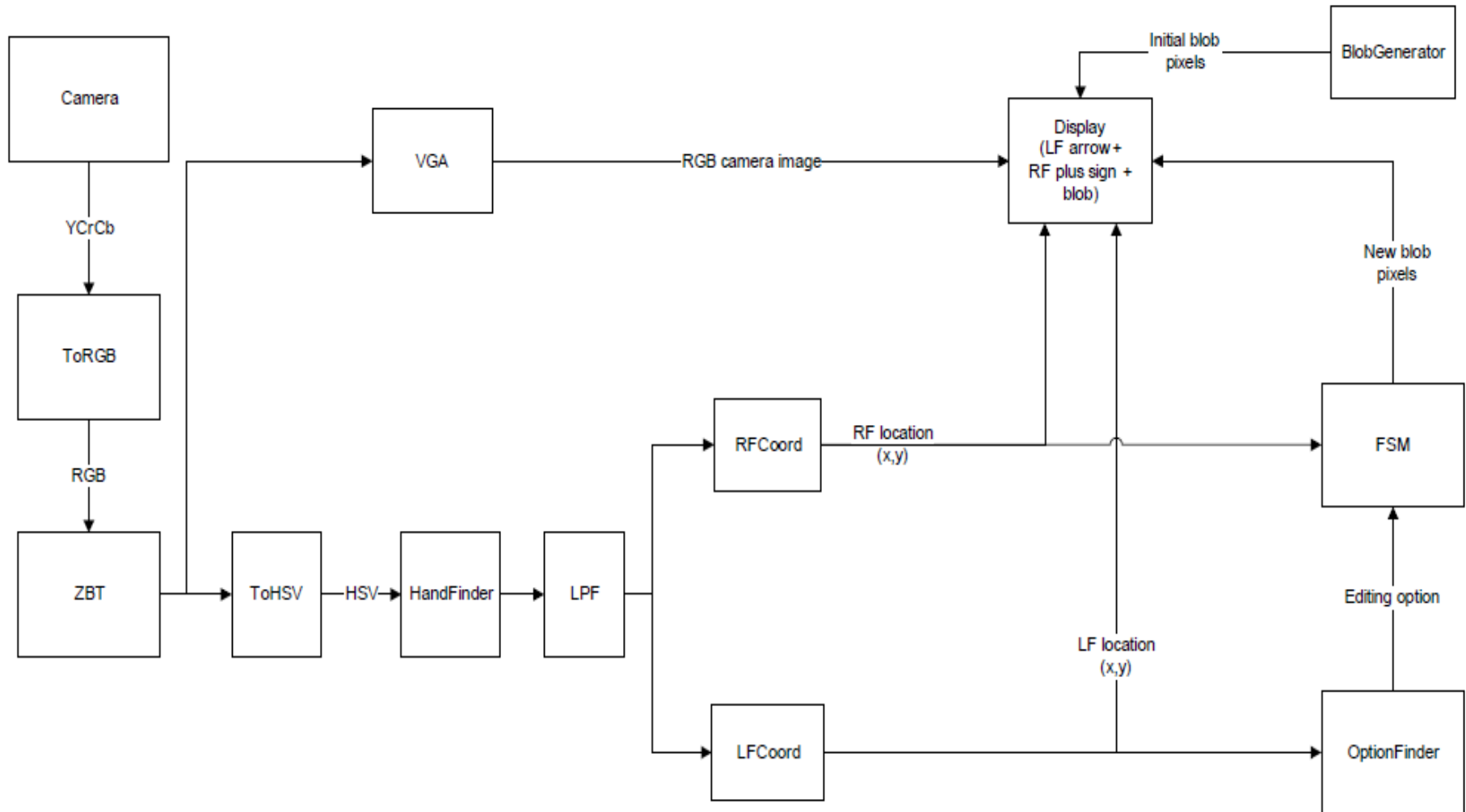# Finger Photo Editor

Nadia Makan

Overview

- Mouse & keyboard unnatural
  - Fingers are easier!
- Technology should adapt to us, not the other way around
- Camera input, finger recognition
- Black/white background
- Visual feedback on screen
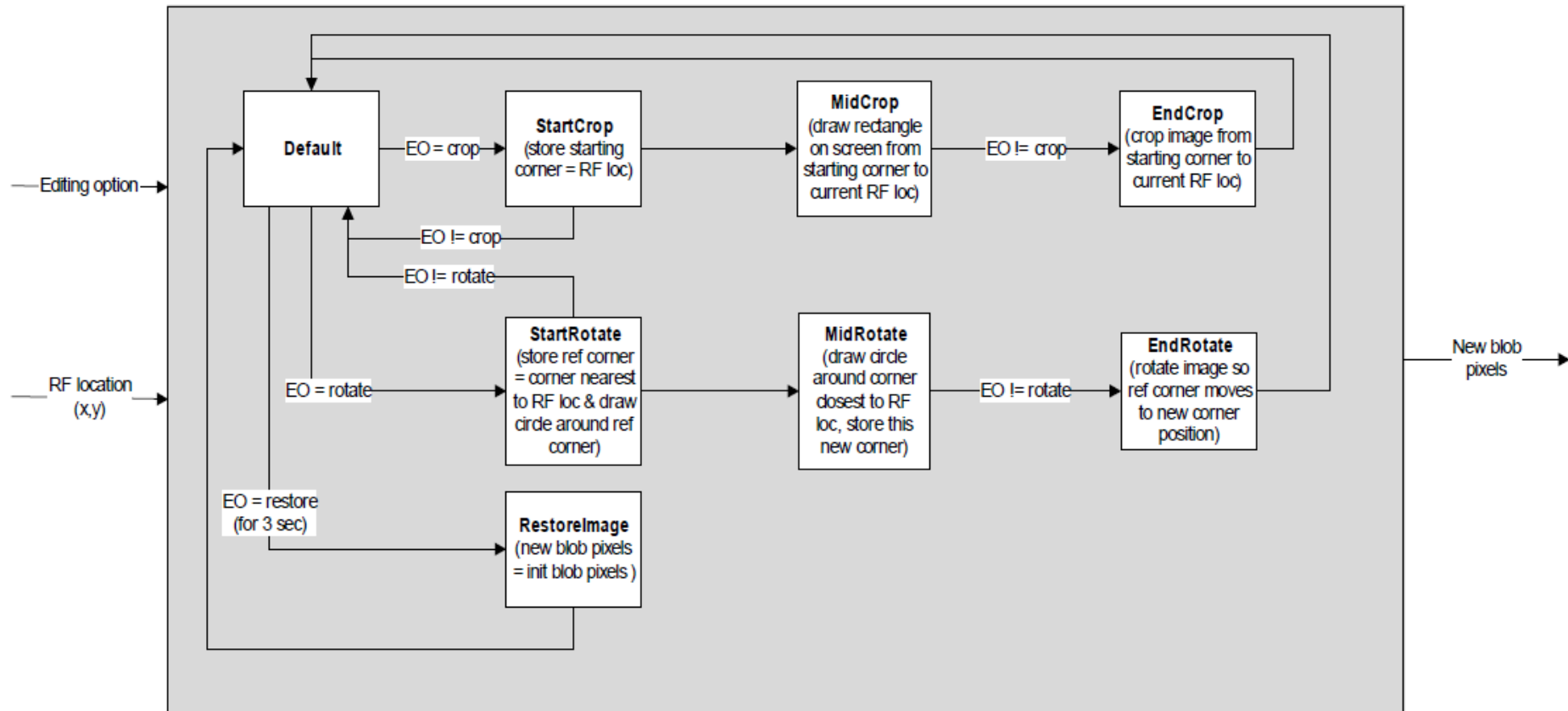- Basic options: Crop, Rotate, Restore

The Screen

Block Diagram

Fingertip Finding

- RGB to HSV

- Find hue = 'flesh color'

- Highest row > n pixels wide

- Divide image into Left/Right to find two fingers

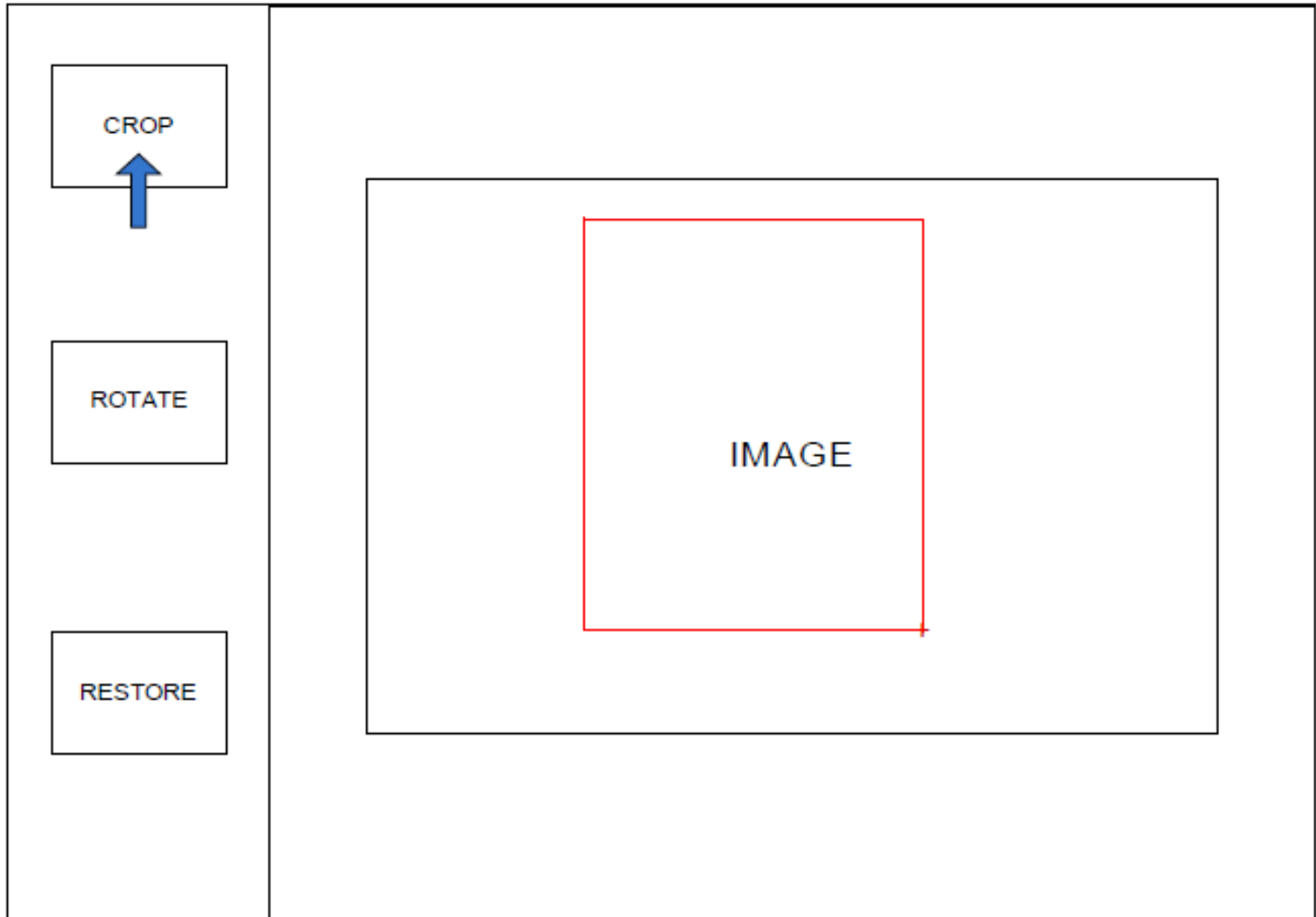- Visual feedback (arrow & plus sign)

FSM

CROP

- RF on starting corner
- LF on CROP
- RF to opposite corner
- LF off CROP

CROP, cont'd

CROP

ROTATE

- RF on reference corner
- LF on ROTATE
  - Black circle around ref corner
- RF to new corner (1 over for 90deg, etc.)
  - Blue circle around new corner
- LF off ROTATE

RESTORE

- LF on RESTORE for >= 3 seconds

Timeline

- Fri 11/20 – (one) Finger finding w/feedback
- Sun 11/22 – Left & Right finger feedback
- Wed 11/25 – first shot at FSM
- Mon 11/30 – finished FSM
- Fri 12/4 – image manipulation & feedback
- Mon 12/7 – debugged & ready