

# ECE 5354/6354 Fall 2016 HW 10 due 11/15

## **Problem 1. motion**

In a picture sequence, the center of a circle is located precisely at the center of pel (28,1) in frame-111. The circle moves with constant velocity such that it is located precisely at the center of pel (67,102) at frame-210. Within which pel is the circle-center in frame-186?

## **Problem 2. H.261**

- (a) In H.261, does each motion vector (MV) pertain to a block or to a MB?
- (b) Does H.261 use level-shifting when computing the DCT?
- (c) In the H.261 standard, can the luminance Y of YCbCr take the value 0 ?
- (d) In H.261, does the DC component of the DCT get divided by the MQUANT value when quantizing?
- (e) Does H.261 use a default quantization table, or do all AC coefficients get divided by the same constant?

## **Problem 3. MPEG**

Complete a preliminary version of your mpeg file with animated video and no sound.

Add sound to the mpeg file using Windows Moviemaker, to generate a \*.wmv file of your animated video with sound. Turn-in both your mpeg file and your WMV file via email.