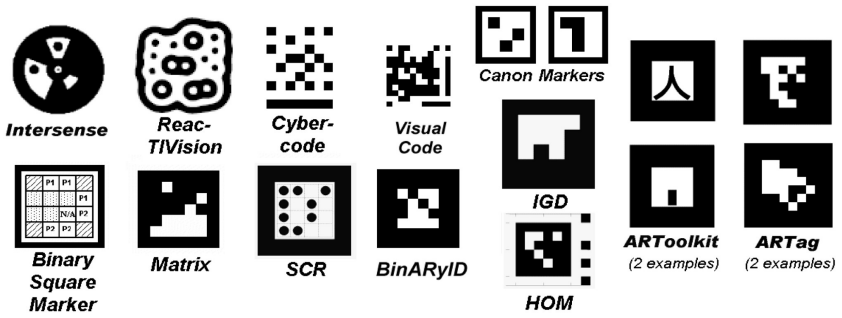
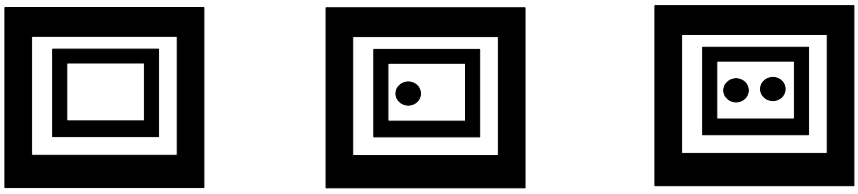
Gebze Institute of Technology
Department of Computer Engineering
BIL 665 / BIL 463
(Introduction to) Computer Vision
Fall 2015
HW2
Nov 20th 2015

In this homework, we will locate fiducial marks of our desing. A fiducial mark is a 2D pattern that can be located easly on a scene. They are mostly used for object pose estimation and in augmented reality applications. Some fiducial marks from the web are as follows



Our fiducial marks will be simpler. There will be three types of fiducial marks as follows



You will design and implement a computer vison system that will capture images from the keyboard, locate and identify the fiducials in the image and display the fiducials 4 corner coordinates at the bottom of the window.
Here are some rules for the homework

- You will not use any libraries other than OpenCV basic tools such as line detection, corner detection, edge detection.
- There could be more than one fiducial in the image, find each of them
- Your program should be fast (at leat 3 frames per second)
- You will prepare and print fiducial marks yourselves
- You should not find any other marks as fiducials, for example, the following should not be found

Prepare a 3 page report that gives step by step detailed algorithm for your system. You should also give sample results and failure cases in your report.

You will compile and demo your system at project lab. Your next howework will depend on this homework, so you should submit this homework.