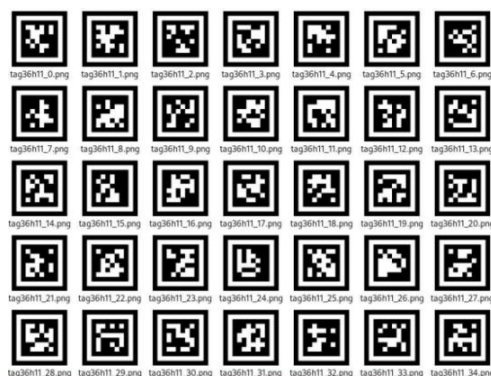# Lesson 3 Tag Recognition

1. Instructions

a. AprilTags are provided in folder name "April Tags Collection", within are 200 different AprilTags for use.

b. Please maintain suitable distance between Tag and WonderCam. Too far or too near distance to the tag can affect the recognition process.

c. Ideal background surrounding the Tag is all white for higher accuracy in detection.

2. Introduction to April Tag Recognition Function

Tag recognition function: Able to detect and recognize AprilTags (support only AprilTag family type TAG36H11) and framed the detected tag with ID on WonderCam display. Through IIC port, the tag position data and 3D dynamic data can be captured to position space orientation.

AprilTag is a visual fiducial system, while similar to the concept of QR Code or barcode, it can be more easily detected, more robustly identified, and less difficult to detect at longer ranges.

It is useful for a wide variety of tasks including augmented reality, robotics, and camera calibration. Tags can be printed from an ordinary printer, and the AprilTag detection software computes the precise 3D position, orientation, and identity of the tags relative to the camera.

3. Tag Recognition Operation

3.1 Enter Function

Push Navigation button to "Tag Recognition" menu.

3.2 Using AprilTag Recognition

In Tag Recognition menu, when WonderCam camera focus on AprilTag

TAG36H11 and appear on display, a + sign will appear on screen on the tag.

WonderCam is able to detect multiple tags with same or different ID.

Please maintain suitable distance between Tag and WonderCam. Too far or

too near distance to the tag can affect the recognition process.