**ABSTRACT**

In this final project will be built a face tracking application using a wireless camera. The camera is online to capture objects. Face detection process is based on the principle in image processing such as skin color segmentation, filtering, edge detection and compared with the existing face templates. The next process is searching face position and determine the center of the face. Then this application will perform face tracking using backpropagation method. Input for backpropagation method is error distance between center of camera and center of object. After using backpropagation to reduce error, its can get the output. Output is actual distance, this distance will be input in camera to tracking object. After testing to this system, the testing in level light intensity, face position testing and testing using 20 people, accuracy rate of this system is 75 %.

**Keyword**: Wireless camera, capture Online, image processing, detection, tracking, backpropagation.