ABSTRACT

Elderly or advanced is the stage where a person is over 65 years old [16]. Caring for an elderly who is easy, especially if the elderly are often left alone at home. To marry the necessary system to occur in the elderly. This system uses the concept of Smart Home Environment. This concept can be made with the quality of one's life for the better.

The system will be built using several tools, namely raspberrypi, picamera, webcam and PIR sensors. The tools will be used in the elderly to supervise their activities. In this final project implemented a tracking algorithm by combining Camshift - Kalman Filter and for prediction of Kalman Filter prediction to study occlusion. Camshift algorithm is an object search algorithm that uses the basic color probability to. While Kalman Filter is a recursive estimator, which requires the previous state and current measurements to estimate the current state

Keyword: *Elderly, monitoring, camera, SmartHouse, Camshift, Kalman Filter*