

Abstract

There are two period of raising chicken that is brooding period and growing period. From both period has mentioned, brooding period has important role in determine advantages and disadvantages chicken farm, cause this period is the critical period. Cause this period in important then there are many factor can be noted in raising, that is temperature, air circulation and coop sanitation. Three factor above almost in all chicken farm still be monitored conventionaly. Conventional method has advantages in cheap budget but has disadvantages in monitoring during 24 hours, cause chick guard need rest. As growing of information and tecnology, disadvantages in raising chick conventionally can be solved using Machine to Machine Communication (M2M) Tecnology. System builded in this final task is system monitoring and controlling temperatur based on machine to machine communication (M2M) in chick coop. The monitoring and controlling is doing otomatically without human intervention. System builded using microcontroller arduino uno as analog to digital coverter (ADC), sensor as data acquisitions of temperatur and value of metane in chicken coop, actuator as temperature controlling and air circulation, microprocessor raspberrry pi as data acquisitions prosessing, OpenMTC as server and data temporary, node.js as webserver and website as data viewer.

Result of implementation in this final task show system can controlling temperature, air circulation and detect smell with sensor MQ5 and system produce success rate 100% for optimal growth and 0% for mortalitas. This implementation has been done three times in urban farming chicken west margahayu raya bandung and every implementation use five chick as its sample. Implementation phase one without system, phase two with lamp actuator 5 watt, and phase 3 with lamp actuator 15 watt. Success of implementation obtained from chick growth reach 20 cm and mortalitas. In implementation phase one obtained rate success 0% for optimal growth and 80% mortalitas, phase two obtained 20% for optimal growth and 0% mortalitas, and phase three obtained 100% for optimal growth and 0% mortalitas.

Keyword : Monitoring System, Otomation, M2M, OpenMTC