

ABSTRACT

From WHO data, the preterm birth rate in Indonesia is 675,700 cases, and is ranked 5th in the world [1]. Normal babies usually have a normal weight of about more than equal to 2500 grams while premature babies weigh less than 2500 grams. Lack of premature baby weight due to the growth of infant organs of the baby has not grown perfect. It may cause abnormalities in infants, one of which is unstable body temperature [2] so that premature infants should be treated into baby incubators.

Most infant incubators in most hospitals still use the human power system to regulate and control the temperature and humidity in the incubator. In previous infant incubator studies [3] did not have a monitoring process for both physicians and infant parents. In many cases a doctor can have multiple patients and have more than one workplace that creates a distance between infants in an incubator with a doctor. This baby incubator monitoring is also necessary for parents of the baby, as parents would want to know the state of the child but can not because there is a possibility, especially a mother, still in the room care so can not supervise the child directly.

To overcome this problem, it is necessary to control the temperature and humidity of the infant incubator automatically based on microcontroller with direct monitoring system using communication machine-to-machine (M2M) based on Internet of Things (IoT) with Fuzzy Logic method.

Keywords: *baby incubator, monitoring, Internet of Thing (IoT), machine-to-machine (M2M), Fuzzy*