

## ABSTRACT

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*The livestock system in Indonesia has two ways, namely wild release and cages, each with its own advantages and disadvantages. One of the problems faced in wild-free farms is that farmers do not know the position of the cattle that are released into the wild. An alternative solution that can be done to solve this problem is to create a system that can help farmers to track down the presence of cattle that are released in the wild. The system that has been implemented consists of several components, namely Wireless Sensor Network, GPS Neo V22, Lora SX 1278, Clock Module, Microcontroller and NodeMCU. Each tracker attached to the cow sends data to the server. Then the microcontroller processes the data and displays it to the user. The results of the experiment can show the position of the cow based on the coordinates on the map displayed on the system with a delay time of 1-10 seconds indoors with a distance of 0-10 meters and outdoors with a delay time of 2-10 seconds with a distance of 0 meters to 1 kilometer. Therefore, the system can be implemented in a wild cattle farming environment.*

*Keywords: GPS Neo V2, Lora SX 1278, Wirelles Sensor Network, Tracking Cows*