

ABSTRACT

Measurements can be interpreted as giving a number to an attribute or certain characteristics possessed by a certain person, matter, and object according to an evident and agreed rules or formulations. Antenna measurements (validation) is a process in order to perceive the characteristics of an antenna. Certain equipment is needed in order to obtain accurate results to help the process of measurements. In particular, antenna measurements requires to use an equipment to make an antenna under test rotates horizontally or vertically in antenna measurements.

Tools that is used to buffer and rotate an antenna under test is called the antenna rotator. Horizontal or vertical rotation aimed to meet the needs of antenna's quality measurements regarding to the polarization and radiation patterns. Due to the lack of controller's development, most of antenna rotator is manually operated. Mini controller in a language term is called microcontroller. Microcontroller is a micro-sized controller tools packed in a form of chip. Antenna rotator is a required tools in a process of antenna measurements, it is expected that the antenna rotator would be able to perform a rotation horizontally and vertically.

An automatic microcontroller-based antenna rotator designed and realized in this final project research. A remote that connected to microcontroller is used to control the antenna rotator. The rotator is manufactured in order to complete the antenna measurements equipment that belongs to Antenna and wireless communication laboratory of Telkom applied science school.

Keywords : *rotator antena, antenna under test, microcontroller, horizontal, vertical*