

ABSTRACT

Development of telecommunication and television technology are very fast and have been one of the primary requirements of human life. But, in that technology there are things that cannot be seen with human eyes that are very useful and very regrettable if we do not use them. I mean is Radio Frequency wave that produced and transmitted by many telecommunication products like Base Transceiver Station (BTS), access point, and many more. Just a little piece of microwave that transmitted are used, and the most of all just widespread around of us. So, in this final project was designed for creating an analog clock based on components that using microwave as electrical source like a battery.

In this final project will create two primary blocks, they are array microstrip antenna and rectifier board. I use array antenna to get more microwaves and has a higher output DC current like what we hope. Then, microwaves that harvested are converted to be DC current by rectifier and distribute to clock engine to turn on the analog clock as like battery.

The result from this final project are a rectenna analog clock that can use microwave then converted to be DC current in 900 MHz frequency as electrical source for analog clock as battery replacer. The measurement of this final project use Network Analyzer and hope got working like what we required. Beside that, this research underdeveloped in Indonesia, so I hope this project being first step in rectenna development for harvesting microwave.

Keyword : Rectenna, Rectenna clock, antenna , rectifier, RF to DC