

## **ABSTRACT**

The lack of coverage from Flexi BTS is causing droop call in The RSIA Hermina hospital Daan Mogot continuously; although the Hospital is a public area.

In the designing, The Indoor Flexi BTS of RSIA Hermina network is rather uniquely different from the other public area network. The reason is because in the hospital network designing needs to calculate the effects from the network device to minimize the negative impacts on medical instrument. An exact analysis and accurate designing is highly required to solve the problem. The main problem of this designing to reduce the effects the Electro Magnetic Interference (EMI) on the medical device so that the performance of the network could be maximal.

The purpose of this Final Project is to design an Indoor Flexi BTS at the RSIA hospital Daan Mogot and to simulate it on Radio wave Propagation Simulator (RPS) and also AutoCAD Software. The highly-sensitive rooms from EMI in the hospital are suspected of floor 1, 2, 3 and 4. The designing will starts from the calculation using drive test simulation to find out the measure of propagation gain from surrounding BTS as a basic standard.