

ABSTRACT

Emergency Broadband Access Network (EBAN) is an unmanned balloon-based wireless broadband access that flies at low altitude and provide a variety of applications as an alternative emergency communications for emergency response in affected areas. One of the applications owned by EBAN is IP video camera that useful for the observation of affected areas. The emergency team can use internet access service with WiFi contained in the EBAN sky station. In addition, EBAN also provides VoIP services, video conference, and Emergency Medical Care Information System (EMCIS). Conditions used in this final project is the Low Altitude (<2.5 km).

In this final project, simulations carried out to see the effect of altitudes and attitudes toward the coverage area. Modelling the system in this final project has been designed by Telkom R & D Center. WiFi solution was chosen because of its popularity use and relatively easy to operate.

The simulation results show that increasing the platform height and angle of platform attitude have an impact on decreasing the Receive Signal Level at the client. Based on the sensitivity of -92 dBm at the client, increasing height of the balloon transmitter EBAN have an impact on decreasing radius and coverage area.

Keywords: WiFi 802.11b / g, Eban, low-altitude platform, free space loss, link budget, platform attitude