

## **Abstract**

Digital Video Broadcast (DVB) is a solution to serve data access network where have global coverage. The satellite that used by DVB is capable to cover a big area or region. DVB services are divided by Packet Identifier (PID) that will set data rate per produced packet. The forecasting for forward and return bandwidth needs will set maximum throughput which used by client to transmit and receive data.

DVB is an innovation on interactive communication media. On them performance, the DVB system is very good, because it is equipped with hi-technology such as ATM, MF-TDMA and turbo code on the transmission.

The performance test of DVB-RCS to applied in country with high rain fall rate is rather need to be done, this is caused by the usages of Ku-Band frequency that very sensitive on rain fade.

The purpose of this final project is to test the availability and reliability DVB-RCS network depend on their characteristic as a solution to provided access network shown by performance on physical link as well as their upper layers. DVB-RCS with uplink and downlink frequency 14GHz and 11GHz have good performance with 98,95% availabilities , this caused by the usage of turbo code on uplink as channel coding able to increasing performance. From traffic side, 512kbps and 128kbps on upstream and downstream for busy hour could not be reached and only had 320kbps, this cause by bandwidth sharing for another SIT.

**Keywords :** DVB, DVB-RCS, MPEG, Satellite.