

## **ABSTRACT**

*Currently, VSAT (Very Small Aperture Terminal) technology is a technology that can be a solution for interconnecting Internet networks. There are several VSAT models, including VSAT Internet Protocol (IP) and VSAT Single Channel Per Carrier (SCPC). VSAT IP is a data, voice and video communication service and imagery over a satellite network. The hub uses time division multiplexing (TDM) channels to communicate with remote antennas, and the remote antennas use IP time division multiple access (TDMA) channels as the protocol to send data to the hub. VSAT SCPC is a satellite access media data communication service that uses a single channel per carrier method for bandwidth-intensive activities such as video conferencing, Voice over Internet Protocol (VoIP), and VSAT SCPC uses FDMA (Frequency Division Multiple Access). Common problems in VSAT are weather conditions and other installation issues, frequent interference between remote hubs, unstable weather changes or other disturbances that cause delays in VSAT network configuration, so it is necessary to further improve the Quality of Service (QoS) system to analyze the VSAT network. IP and VSAT SCPC use latency parameters, service levels, and data rates. The average latency produced by VSAT IP was  $\pm 289$  ms and VSAT SCPC was  $\pm 280$  ms. In April, May and June 2022, the service level VSAT IP reached 99.90%, and VSAT SCPC reached 99.91%. Different data rates and total transmission times range from 500-533 Kbps for VSAT IP and 727-888 Kbps for VSAT SCPC. The quality of service produced by VSAT IP is not fundamentally different from VSAT SCPC.*

*Keywords: VSAT IP, VSAT SCPC, Delay, Service level , data rate.*