



## Digital Receipt

This receipt acknowledges that **Turnitin** received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author: **Taufik Rahman**  
Assignment title: **논문 및 과제 검사 - 유사도 검사 시 D..**  
Submission title: **Inovtek-Implementasi Automatic Up...**  
File name: **Inovtek-Implementasi\_Automatic\_U...**  
File size: **1.92M**  
Page count: **15**  
Word count: **4,123**  
Character count: **24,299**  
Submission date: **16-Oct-2020 03:21AM (UTC+0900)**  
Submission ID: **1416252869**

JURNAL INOVTEK POLBENG - SERI INFORMATIKA, VOL. 4, No. 1, 2019

ISSN : 2527-9866

### **Implementasi Automatic Uplink Power Control (AUPC) Pada VSAT Single Channel Per Carrier (SCPC) (Studi Kasus PT. PT. Satkomindo Mediyasa)**

Taufik Rahman<sup>1</sup>, Fatwa Aulia Rahman<sup>2</sup>  
Universitas Bina Sarana Informatika, Jl. Kramat Raya No.98, RT.2/RW.9, Kwitang, Kec. Senen, Kota  
Jakarta Pusat, Daerah Khusus Ibukota Jakarta 10420<sup>1</sup>  
Sekolah Tinggi Manajemen Informatika dan Komputer Nusa Mandiri, Jl. Raya Jatitawarin,  
RT.2/RW.13, Cipinang Melayu, Jakarta Timur 13620<sup>2</sup>  
taufik@bsi.ac.id<sup>1</sup>, fatwarahman14@gmail.com<sup>2</sup>

**Abstract** - Cable networks are not suitable for connecting geographically distant communication systems such as Indonesia due to the low efficiency of the installation process, which requires large capital. Therefore, an alternative technology is needed, such as VSAT, but it is vulnerable to interference and equipment weaknesses that will reduce performance. The weather in Indonesia is erratic. Sometimes suddenly the rain makes the VSAT communication network disrupted, because you have to adjust the transmit power manually. Moreover, PIC in the location does not understand VSAT. Based on the results of analysis and testing, there was a decrease in ping quality, Eb/No, C/N when it rained. Therefore, it is necessary to adjust the power transmit so that the quality returns to normal with the weather at the location. After AUPC implementation, the transmit power adjusts automatically. Ping value becomes more stable with a maximum delay of 770ms to the IP Modem monitoring site and 789ms to the IP Lan PT. MSP. C/N value obtained is 21.09dB in accordance with the ideal C/N range for VSAT networks, Eb/No value is stable according to the predetermined target, namely 10 dB on the HUB modem and 9 dB on the monitoring site modem. When the modem detects a decreasing or increasing Eb/No value, the system automatically adjusts the transmit power so that the Eb/No value matches the target.

**Keywords** - AUPC, VSAT, SCPC, Eb/No, C/N.

**Intisari** - Jaringan kabel tidak cocok menghubungkan sistem komunikasi yang jauh secara geografis seperti negara Indonesia karena efisiensi yang rendah dari proses pemasangan, dibutuhkan modal besar. Karena itu, diperlukan teknologi alternatif, seperti VSAT namun rentan terhadap gangguan dan kelemahan peralatan yang akan menurunkan kinerja. Cuaca di Indonesia tidak menentu terkadang tiba-tiba hujan membuat jaringan komunikasi VSAT terganggu, karena harus menyesuaikan power transmit secara manual. Terlebih PIC di lokasi tidak mengerti tentang VSAT. Berdasarkan hasil analisa dan pengujian terjadi penurunan kualitas ping, Eb/No, C/N ketika hujan turun. Oleh karena itu, perlu adanya penyesuaian power transmit agar kualitas kembali normal dengan cuaca di lokasi. Setelah implementasi AUPC, power transmit otomatis menyesuaikan. Nilai ping menjadi lebih stabil dengan delay maksimum di 770ms ke IP Modem site kawasi dan 789ms ke IP Lan PT. MSP. Nilai C/N didapat angka 21.09dB sesuai dengan range C/N ideal untuk jaringan VSAT. Nilai Eb/No stabil sesuai dengan target yang telah ditentukan yakni 10 dB pada modem HUB dan 9 dB pada modem site kawasi. Ketika modem mendeteksi nilai Eb/No turun atau naik, sistem otomatis menyesuaikan power transmit agar nilai Eb/No sesuai dengan target.

**Kata Kunci** - AUPC, VSAT, SCPC, Eb/No, C/N.