ABSTRAK

Desain Jaringan Teknologi Informasi (TIK) Terintegrasi dengan *Access Point* dan *Closed Circuit Television* (CCTV)

(Studi Kasus : Gelora Bungkarno Jakarta untuk Asian Games 2018)

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Asian Games 2018 akan diselenggarakan di Indoensia lebih tepatnya di jakarta dan Palembang , acara ini memerlukan kebutuhan *connectivity* yang handal yaitu *throughput bandwidth* yang sangat besar, selain memerlukan *throughput bandwidth* yang sangat besar Infrastruktur yang dibangun nantinya harus memperhatikan *Quality Of Service* (QOS) sesuai standar yang telah ditetapkan oleh *Telecommunications and Internet Protocol Harmonization Over Networks* (TIPHON), untuk parameter QoS sesuai standar TIPHON diantaranya *jitter, packet loss, throughtput,* dan *delay*. sedangkan untuk kebutuhan keamanan karena banyaknya pengunjung pihak GBK akan menerapkan sistem *surveillance* yang *real time* dan dapat dimonitor oleh pihak GBK.

Dasar penelitian ini bertujuan untuk memberikan solusi *connectivity* dan *surveillance* yang dibutuhkan dengan cara mendesain Jaringan TIK agar dapat Terintergasi dengan *access point* dan CCTV selain itu memastikan nilai pengukuran QoS Jaringan TIK sesuai dengan TIPHON.

Hasil dari penelitian ini telah memenuhi standar yang telah ditetapkan TIPHON untuk rata rata nilai *throughput* perangkat CCTV sekitar **9 Mbps** , *packet loss* dengan rata rata nilai **0.0151%**, Delay **0.00294 ms** dan jitter sekitar **0.365 x 10 $^{-9}$ ms** dan untuk perangkat Access point rata rata nilai *throughput* sekitar **3.7 Mbps** , *packet loss* dengan rata rata nilai **0%**, Delay **1.87 ms** dan jitter sekitar **0.154 x 10 $^{-5}$ ms.**

Kata kunci *:* Asian games 2018 , *connectivity, surveillance, jitter, packet loss, throughtput,* dan *delay*

ABSTRACT

Design of Information Communication Technology (ICT) integrated with Access Point and Closed Circuit Television (CCTV)

(Case Study : Gelora Bungkarno Jakarta for Asian Games 2018)

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Asian Games 2018 will be held in Indonesia more precisely in Jakarta and Palembang, this event requires the need of reliable connectivity is a huge bandwidth throughput, in addition to require a huge bandwidth throughput Infrastructure built later must pay attention to Quality Of Service (QOS) has been established by Telecommunications and Internet Protocol Harmonization Over Networks (TIPHON), for QOS parameters according to TIPHON standard including jitter, packet loss, throughtput, and delay. While for the security needs because of the many visitors GBK party will implement a real-time surveillance system and can be monitored by the GBK.

The basis of this study aims to provide connectivity and surveillance solutions required by designing ICT Networks to be Terintergasi with access point and CCTV in addition to ensuring the measurement value of QoS ICT Networks in accordance with TIPHON.

The results of this study have met the standards set by TIPHON for the average CCTV device throughput value of about **9 Mbps**, packet loss with an average value of **0.0151%**, Delay **0.00294 ms** and jitter about **0.365 x 10 $^{-9}$ ms** and for the average Access Point device throughput value about **3.7 Mbps**, packet loss with average value **0%**, Delay **1.87 ms** and jitter about **0.154 x 10 $^{-5}$ ms.**

Keywords *:* Asian games 2018 , *connectivity, surveillance, jitter, packet loss, throughtput,* and *delay*