

ABSTRACT

Basically the development of communication technology caused by the desire to continually improve performance, capability and efficiency of the previous generation of technology. This requires an increase in performance and service. PT Telkomsel, one of the operators that have improved the system on data services. ATM and Ethernet hybrid transmission is converted to a base that is passed using the native IP Ethernet to improve overall network performance.

Observation begins with collecting data and information on the performance parameters of the Node Bs in the area of Bandung. Indicators (KPIs) were observed include accessibility service, retainability service, integrity service and *bandwidth* utilization. It is intended to observe the results of the comparison before and after modernization is conducted.

From the analysis found an increase in the value of the KPI accessibility service including 70% CSSR CS, 95.33% CSSR PS and 96.67% HSDPA accessibility success rate. In the service retainability KPIs increased 88% CCSR CS, 93.33% CCSR PS and 80% HSDPA retainability success rate. At integrity service has increased 95,33% SHO, 58% ISHO and 83,33% IFHO. While the increased *bandwidth* is 92%.

Keywords : 3G, Node B, IP RAN, bandwidth utilization , accessibility service, retainability service, integrity service.