

ABSTRACT

The rapid development in telecommunication technology demands the presence of effective and efficient infrastructure, one of which is the Automatic Telephone Exchange (STO) Backbone of PT. Telkom Indonesia Tbk, the leading telecommunication service provider in Indonesia. They continuously strive to maximize their services, especially in the Telkom Regional III West Java area. However, with the exponential growth in the number of STOs, conventional approaches in maintenance and data collection become inadequate. The emergence of a need for a more innovative mapping solution, oriented towards the latest technology, is the basis for this research.

To address this challenge, the study focuses on designing a website that integrates the Geographic Information System (GIS) with satellite imagery. This website is designed to provide an interactive visualization of the STO Backbone locations for the Telkom Regional III in the West Java are. Furthermore, features like real-time monitoring and STO data collection databases are integrated into the platform, ensuring ease in management and operations. This STO monitoring system is web-based using WebGIS (Website Geographic Information System), incorporating the leaflet library, the Codeigneter framework, and the MySQL database.

The outcome of this research is a user-friendly and responsive mapping website, delivering detailed information about the STO locations in Telkom Regional III West Jawa with high precision due to its integration with satellite imagery. This system has successfully enhanced in data collection for STO monitoring, offering improved monitoring capabilities.

Keywords: *STO Backbone, Geographic Information System, Satelit Imagery, Mapping Website, Leaflet..*