

Abstract

Utilizing high-speed network technologies, such Fiber to the Home (FTTH), has become crucial to satisfying residential environments' demands for dependable and quick connectivity. In the MEKAR SARI REGION, FTTH NETWORK DESIGN AND ANALYSIS utilizing OptiSystem simulation software is covered in this final project. Designing, evaluating, and optimizing FTTH networks to meet the demands of home users is the primary goal of this research. Utilizing OptiSystem for network modeling, field surveys, and user needs analysis are all part of the research technique.

The design and analysis of FTTH networks using OptiSystem simulation software is covered in this paper. The primary aim of this research is to maximize the efficiency of fiber optic networks in facilitating the connection between service providers and households. Using OptiSystem 7, the research process comprises modeling and simulating different network components like splitters, receivers, and light sources. The creation of a FTTH network architecture that can enhance the quality and speed of internet services in the investigated area is one of the study's implications. It is anticipated that the study would offer network developers and service providers useful advice for a more successful and efficient deployment of FTTH infrastructure.

Key Words: Network, FTTH, Internet, Optisystem,