

## Optimasi jaringan transmisi optik Medan - Pekanbaru dengan proteksi SNCP ring = Optimize optical transmission backbone section Medan-Pekanbaru using protection SNCP ring

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### Abstrak

Sistem transmisi SDH mempunyai berbagai macam proteksi dimana penggunaannya disesuaikan dengan kebutuhan trafik, topologi jaringan maupun faktor pertimbangan ekonomis. Dalam perancangan dan pembuatan system transmisi SDH haruslah memperhitungkan kemungkinan terburuk, yaitu kegagalan sistem transmisi tersebut. Karena itu diperlukan pengetahuan yang baik tentang sistem proteksi SDH agar reliabilitas jaringan transmisi tetap terjaga.

Dalam studi ini akan mencoba untuk melakukan optimasi terhadap salah satu jaringan tulang punggung Sumatra pada lajur transmisi Medan - Pekanbaru. Dimana dengan optimasi ini, dapat meningkatkan survivability, kapasitas dan utilisasi penggunaan kapasitas.

Metode studi banding ini, mencoba pendekatan dari sistem proteksi SDH yang digunakan pada lajur transmisi Medan ? Pekanbaru, kekurangan dan kelebihan serta pendekatan kemungkinan terjadinya perubahan konfigurasi sistem pada masa depan. Sistem proteksi SDH yang dipakai PT. Excelcomindo Pratama yaitu MSP 1+1, MS-SPRing (Multiplexing Section Shared Protection Ring) dua serat kabel optik dan SNCP (Subnetwork Connection Protection).

<hr>Synchronous Digital hierarchy consists of a various kind of protection system, where the implementation and usage of the protection system depends on some factors such as the need of traffic, network topology, and economical consideration. In the process of designing and implementation SDH transmission must consider the worse factor, which is the possibility of the failure in the transmission system itself. Mastering the knowledge of the SDH Protection is essentially needed to maintain the reliable of the network transmission.

The objective of this is to optimized one of backbone transmission at PT. Excelcomindo regional Sumatra for section medan - pekanbaru. The optimized network should be able to improve network survivability, network capacity and utilized the current capacity.

The methods of writing is focus in detail any advantages and disadvantages, the possibility for changing the configuration at the future, by approaching to network topology, and schema system protection and network survivability at section medan-pekanbaru. Currently, system protection that is using in section Medan-Pekanbaru are MSP 1+1, 2 Fiber MSSPRing (Multiplex Section Shared Protection Ring) and SNCP (Subnetwork Connection Protection).</i>