ABSTRAK

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Judul : **Pendistribusian IPv6 dengan Routing Protocol OSPFv3 di PT. Internetwork Komunikasi Indonesia**
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Internet Service Provider (ISP) PT. Internetwork Komunikasi Indonesia tengah mendistribusikan alamat IPv6 ke seluruh jaringan mereka. Pendistribusian alamat IPv6 ini dilakukan dengan tujuan mengatasi permasalahan akan habisnya ketersediaan alamat IPv4 di masa mendatang. Alamat IPv6 akan didistribusikan menggunakan *Open Shortest Path First* (OSPF), versi OSPF yang digunakan tentu diharuskan mendukung IPv6, yaitu OSPFv3. Perancangan serta implementasi jaringan IPv6 dibangun dengan metode *Network Development Life Cycle* (NDLC), adapun pengembangannya menggunakan infrastruktur yang saat ini sudah ada dan berjalan di jaringan PT. Internetwork Komunikasi Indonesia. Tujuan dari tugas akhir ini adalah untuk mendistribusikan alamat IPv6 di jaringan inti PT. Internetwork Komunikasi Indonesia dengan *routing protocol* OSPFv3, dengan hasil alamat IPv6 terdistribusi ke jaringan PT. Internetwork Komunikasi Indonesia.

Kata kunci: *Internet Service Provider*, *IPv6, Open Shortest Path First, NDLC, Router*

ABSTRACT

Internet Service Provider (ISP) PT. Internetwork Komunikasi Indonesia was distributing IPv6 addresses across their networks. The distribution of IPv6 addresses is carried out with the aim of overcoming the problem of running out of IPv4 addresses in the future. IPv6 addresses will be distributed using Open Shortest Path First (OSPF), the OSPF version used is of course required to support IPv6, namely OSPFv3. The design and implementation of the IPv6 network was built using Network Development Life Cycle (NDLC) methods, while the development uses current exist and running on PT. Internetwork Komunikasi Indonesia's network. The purpose of this final project is to distribute IPv6 addresses in the core network of PT. Internetwork Komunikasi Indonesia with OSPFv3 routing protocol, with the result that IPv6 addresses are distributed to the PT. Internetwork Komunikasi Indonesia's network.

Keyword: *Internet Service Provider, IPv6, Open Shortest Path First, NDLC, Router*