

ABSTRACT

Multi-Operator Core Network (MOCN) is a project aimed at creating a core network system for multiple telecommunication operators within a single system. It was first implemented in Indonesia by Indosat Ooredoo and Hutchison 3. Before their merger, Indosat Ooredoo had 29,503 physical Base Transceiver Stations (BTS) and Hutchison 3 Indonesia had 32,489 physical BTS, totaling **61,992 physical BTS** that needed to be maintained and monitored but were not integrated with each other. This led to a greater, but also unintegrated, focus on customer service. With MOCN, the BTS networks can be integrated, allowing for customer service to be maximized. Indonesia currently uses a tower co-location scheme, where more than one operator can be present on a single tower. Similarly, Indosat Ooredoo and H3I had **22,389 physical BTS** located on the same tower, commonly referred to as "pair collo." This necessitated a decision on which nodes to retain or deactivate when merging the networks. A technical analysis, considering BTS capacity, coverage, antenna position, and transmission mode, was conducted to determine which BTS would provide greater benefits to IOH (Indosat Ooredoo Hutchison) after the network merger. The network merger is expected to result in a **27.6% efficiency in network maintenance**, along with a reduction in maintenance costs. This research aims to provide strategic and operational solutions for managing the merged infrastructure, specifically regarding operational site selection and network optimization. The study employed a literature review, case studies, and comparative analysis. The implemented solutions include reconciliation and performance monitoring post-MOCN, ensuring network quality is maintained while maximizing tower rental efficiency.

Keywords: MOCN, Tower Share, Customer Experience, Pair Collo, Efficiency Network