

ABSTRACT

In the passenger movement area, the Indonesian ATR 72 had a huge increase. In 2013, 4.2 million people flew on 196 different routes. As a result, it's critical to comprehend the ATR 72's structural network in Indonesia. Network analysis is required to address any additional issues that may arise as a result of the expansion.

To visualize an exact relationship between a node and any other node in the network, a modeling network is required. Characterizing the network will give you a better understanding of it. The network characteristics or network metrics are detailed information about each node in relation to the entire network. The average degree, average weighted degree, diameter, average shortest path, graph density, average clustering coefficient, and average neighbourhood overlap are all used to calculate network metrics. The average clustering coefficient will be the most important statistic for network optimization.

Due to the lack of a strong relationship between the two groups and between the nodes within each group, the eastern section of the network is the best area to optimize. With only 10 new network edges, the optimization version on Nabire Airport manages to increase the network average clustering coefficient by 28.06% from its initial value.