ABSTRACT

ANALYSIS OF INTERFERENSI IMPACT REDUCTION ON WIRELESS NETWORK *DESIGN* BUILDING SCHOOL OF INDUSTRIAL ENGINEERING TELKOM UNIVERSITY LANDMARK TOWER WITH GUARD BAND METHOD

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Wireless is a technology that is developing at this time because the media does not require a cable as a transmission medium. On this occasion, the author uses an Access point which is a device from the wireless network design of the FRI TULT Telkom University building. On a Wireless network, it can cause interference which is the heaviest nuisance in the world of WiFi, and interference is a fellow radio wave signal that operates at the same frequency and area. Interference measurement will be carried out through a simulation that has been designed on an infrastructure using Ekahau AI pro software, where from the infrastructure, three measurements are carried out, namely, coverage area measurement, channel interference, and signal-to-noise ratio measurement. In addition to the Guard Band method, the author uses the Network Development Life Cycle Method, a design framework explained through the research pathways. The NDLC stage points are the analysis, design and simulation prototyping stages. The network infrastructure design will be simulated with the Ekahau AI Pro software. The design results were tested based on the Cisco Wireless High Client Density Design Guide with parameters of signal strength, signal-to-noise ratio, and channel Interference. This study resulted in recommendations for changes to network infrastructure to meet the needs of wireless network users in carrying out activities.

keyword: *Wireless, Access point, Interferensi NDLC, Guard Band*