

ABSTRACT

ASSESSING THE PLACEMENT AND EFFECTIVENESS OF EXISTING WIRELESS NETWORK DEVICES AT FRI TULT USING NETWORK DEVELOPMENT LIFE CYCLE (NDLC) METHOD

By:

DANDY RAY PANAHTAN MANURUNG

1202184130

The use of wireless networks has almost been used by everyone because it is practical and makes many activities easier. It is also used by the Faculty of Industrial Engineering (FRI) at Telkom University in its new building, the Telkom University Landmark Tower (TULT). The condition of existing wireless network devices in FRI is currently still the default without any studies to build wireless network devices that are by field conditions. The research will conduct an analysis using Network Development Life Cycle (NDLC) method which focuses on three stages, namely the analysis stage, the design stage, and the prototyping simulation stage. Then analyze the existing wireless network using software such as Ekahau, Netspot, and inSSIDer. Some of this software will get data such as spread signal coverage, Signal Interference Ratio (SIR), and Signal Strength. From the discussion that uses this data, it will produce designs or proposals in the form of moving access points, adding access points, reducing access points and finally there are recommendations for replacing wireless devices. This recommendation is an effort to make the wireless network at FRI TULT more effective or optimal and to minimize the occurrence of interference without reducing the quality of the existing network.

Keyword: Wireless Network, Network Development Life Cycle (NDLC), Signal to Interference Ratio (SIR), Signal Strength, Netspot, Ekahau, inSSIDer.