ABSTRACT

Yayasan Kesehatan (YAKES) *Telkom is a health institution that provides healthcare services to all Telkom employees, retirees, and their nuclear family.*

YAKES *Telkom has implemented a* WAN *infrastructure to support its business processes. However, in its application, WAN infrastructure still uses single link. Single link is a condition in which there is only one path of data flows at accessing the server. Thus, when the path is off, there is no other data stream path that serves as an alternative path, which causes access to the server cannot be done. Based on these conditions, it takes a new network design as backup links. The design of this network is wireless network design, which is wireless outdoor using Network Development Life Cycle* (NDLC) *methodology. This methodology is through the analysis phase, the design stage, and the prototyping simulation phase. The design goal of wireless network design is to optimize the current* WAN *infrastructure, which will make some impact towards business processes.*

The final result of this research is that the proposed wireless network design used as redundancy link WAN *Yakes Telkom, could use two methods to represent wireless connection, they are bridging method and routing method.*

Keywords: Wireless Network, WAN, *Redundancy Link*, NDLC.