ABSTRACT

Named Data Networking (NDN) is a new Internet architectural paradigm that shifts concentration from host-centric to data-centric. This architecture features in-network caching and multipath forwarding which can improve network and application performance and resilience. The NDN *routing* protocol that is still being developed today is an adaptation of the *routing* protocol algorithm on the Internet with a few modifications. Algorithms such as link-state and distance-vector are the focus of developing *routing* protocols, such as NLSR. In addition, geometric *routing* and centralized *routing* are also *interest*ing research for researchers because they have mechanisms that can support future *routing*.

Named-data Link State *Routing* protocol (NLSR) is a *routing* protocol that offers designs and features such as hierarchically structured naming, security where data packets have signatures, and multi-path forwarding, where data packets are forwarded to paths with the same cost regardless there is a forward loop because the NDN architecture is Forward Loof Free (FLF). Determining a multi-path forwarding protocol requires a lot of data that presents the relationship between related variables.

Therefore, it is necessary to have comprehensive data that supports the NDN *routing* protocol to be more optimal. This final project presents comprehensive data on the effect of the number of *face*s on QoS in NDN networks using the NLSR *routing* protocol and ASF forwarding strategy.

Keywords: NDN, caching, forwarding, *routing* protocol, NLSR, ASF, Multi-path forwarding.