

## **ABSTRACT**

*Video conferencing systems require a network with quality of service and acceptable cost. IEEE 802.11 wireless LAN technology can be used for networks with low cost and easily expandable. For conferencing applications however, the technology is not yet qualified quality of service. Therefore, the concept of cross layer design of wireless LAN is proposed to solve this problem.*

*The concept of cross layer design based on H.264/Scalable Video Coding (SVC) and IEEE 802.11e wireless networks have been implemented in the NS2 simulation software. NS2 simulation aims to deliver four streams of traffic from the application conference with different priorities and to guarantee quality of service to video conferencing applications that through the proposed network of cross-layer design of wireless LAN.*

*Result of NS-2 simulation show that CLD concept can send 99.68% packages of video with the average of delay 10.66 millisecon. Thus, this new design has a potential utilized in the telemedicine system.*

**Keywords:** *Video conference, Cross Layer Design, H.264/Scalable Video Coding (SVC), IEEE 802.11e*