ANALYSIS OF TRAFFIC PERFORMANCE OF A TYPICAL WIRELESS LAN ENVIRONMENT

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ABSTRACT

Wireless Local Area Networks (WLANs) are one of the most promising access technologies for the upcoming fourth generation wireless communication systems. This paper is about analysis of traffic performance of a typical wireless LAN environment. The performance of the wireless LAN involved several parameters such as the number of Co-Channel, overlapping signal, link score and signal strength. When all parameters were evaluated, several factors need to be taken into account such as the types of wireless LAN that has been used and the type of modem while transferring data. In this study, the wireless LAN area that has been covered is around level 11 at Faculty of Electrical Engineering, Uitm Shah Alam. Most of the wireless LAN security status is open network with security password or security patterns. This paper described the procedure and several important measurements to analyze the traffic performance in the specified regions. This collected data is done using inSSIDer software. The function of the software is to determine WLAN performance based on the signal strength of each network or access point.

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CHAPTER 1

1.0   INTRODUCTION

This chapter discusses a brief introduction about the background of an overall research project, including background, problem statement, objectives, and scope of works and outline of this thesis.

1.1   BACKGROUND

A wireless local area network (WLAN) is a flexible data communications system implemented as an extension to or as an alternative for, a wired LAN [1]. Using radio frequency (RF) technology, WLANs transmit and receive data over the air, minimizing the need for wired connections [1]. Thus, WLANs combine data connectivity with user mobility. WLANs offer the following productivity, convenience, and cost advantages over traditional wired networks:

   • Mobility: WLAN systems can provide LAN users with access to real-time information anywhere in their organization. This mobility supports productivity and service opportunities not possible with wired networks.

   • Installation Speed and Simplicity: Installing a WLAN system can be fast and easy and can eliminate the need to pull cable through walls and ceilings.

   • Installation Flexibility: Wireless technology allows   the network to go where wire cannot go.