

REQUIREMENT ANALYSIS FOR LAN IMPLEMENTATION IN KUSZA

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By

MOHD FADZIL BIN ABDUL KADIR

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Tandatangan
(Signature)

:

FAZLI BIN AZZALI
Pensyarah
Sekolah Teknologi Maklumat
Universiti Utara Malaysia

Tarikh
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ABSTRACT

The implementation of LAN technologies in universities and colleges campus area has been applied a few decades ago. Communications networks are core infrastructure for higher education, providing an essential foundation for all electronic teaching, research, library, and administrative services. LAN technology has helped to simplify networking by enabling multiple computer users to simultaneously share resources in a home or business, and is the perfect way to improve data connectivity. Hence, this project is to study the requirement analysis of LAN implementation in Kolej Ugama Sultan Zainal Abidin (KUSZA) concentrating on the new academic buildings which include the technology of the LAN, user community, and the applications for the users to access the campus network. This project also compares the technology between the wired-LAN and wireless LAN that suitable to the KUSZA environment.

ABSTRAK

Sejak beberapa dekad yang lalu, teknologi Rangkaian Kawasan Setempat atau *Local Area Network* (LAN) telah digunapakai di kampus universiti dan juga kolej. Rangkaian komunikasi merupakan teras infrastuktur kepada institusi pengajian tinggi yang merupakan asas penting untuk pengajaran, kajian, system perpustakaan dan perkhidmatan pentadbiran yang berasaskan komputer. Teknologi LAN telah menolong memudahkan sistem rangkaian komputer, di mana ianya membolehkan para pengguna komputer untuk berkongsi sumber samada di rumah atau untuk menguruskan perniagaan, dan ianya juga merupakan cara yang sempurna untuk memperbaiki perhubungan antara data. Oleh itu, projek ini dibuat untuk mengkaji keperluan analisis pelaksanaan LAN di Kolej Ugama Sultan Zainal Abidin (KUSZA) terutamanya ke atas bangunan akademik yang baru dibina di mana termasuklah akan penggunaan teknologi LAN, komuniti pengguna dan juga aplikasinya oleh pengguna untuk berhubung dengan rangkaian kampus. Projek ini juga akan membandingkan teknologi antara LAN berwayar dan LAN tanpa wayar yang bersesuaian dengan keadaan persekitaran KUSZA.

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MOHD FADZIL BIN ABDUL KADIR

Faculty of Information Technology

Universiti Utara Malaysia

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CHAPTER 1

INTRODUCTION

A local area network (LAN) is usually privately owned and links the devices in a single office, building or campus (Forouzan, 2003). LAN is fast becoming indispensable for small and medium sized business for sharing information, applications and resources within a restricted geographical area. The linked computer and related equipments maybe anything from full-scale mainframe computing system to small desk top office workstations, terminals, peripherals, and etc. LANs are distinguished from other kinds of networks by three characteristics which are the size, the transmission technology, and the topology (Tanenbaum, 1996).

The implementation of LAN technologies in universities and colleges campus area has been applied a few decades ago. Communications networks are core infrastructure for higher education, providing an essential foundation for all electronic teaching, research, library, and administrative services. LAN technology has helped to simplify networking by enabling multiple computer users to simultaneously share resources in a home or business, and is the perfect way to improve data connectivity.

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