

Performance of LAN under Different Ethernet Wiring Standard and Different Frame Size

Ashraf A.M. Khalaf *, Mostafa S.A. Mokadem **, Khalil A. Ahmad *

**Department of Electronics & Communications Engineering, Faculty of Engineering, Minia University, Minia, Egypt*

***Egyptian Electricity Holding Company, Cairo, Egypt*

ashkhalaf@yahoo.com, mostafashokry0@gmail.com

Abstract— Commonly abbreviated Local Area Network LAN is a computer network that covers only a small area networks, such as campus computer networks, buildings, offices, in homes, schools or smaller. Currently, most LANs based on the IEEE 802.3 Ethernet technology using devices such as hubs and switches devices, which have a data transfer speed of 10, 100, or 1000 Mega bit per second (Mbps). In this paper, we will evaluate the performance of LAN under different Ethernet wiring standards (10BaseT, 100Base and 1000BaseT) with different frame size.

Keyword— Frame size, 10BaseT, 100BaseT, LAN performance, Switch, Hub.



Ashraf A.M. Khalaf (M'98) Received his B.Sc. and M.Sc. degrees in electrical engineering from Minia university, Egypt, in 1989 and 1994 respectively. He received his Ph.D in electrical engineering from Graduate School of Natural Science and Technology, Kanazawa university, Japan, in Marsh, 2000. He is currently works as an associate professor at electronics and communications engineering Department, Minia University, Egypt.



Mostafa S.A. Mokadem was born in Aswan at 1989. He got his B.Sc. degree from faculty of engineering, department of communication and electronics at 2011. He works as an engineer in the Egyptian Electricity Holding company, Ministry of Electricity and renewable Energy. He is currently a master course student for M.Sc. degree in Electrical Engineering (Communication and Electronics)-Faculty of Engineering, Minia University, El-Minia, Egypt.

Khalil A. Ahmad

He is a professor in the department of electrical engineering, faculty of engineering, Minia University, Minia, Egypt.