

EAC

DE LA SALLE UNIVERSITY

IMPROVED CHANNEL UTILIZATION OF L-EXPRESSNET
BY A SIMPLE ADDITION OF A COUNTER AND A LINE
TO THE LEXA MODULE

In partial fulfillment
of the requirements for the Degree
Master of Engineering Education
Major in Electronic Communication Engineering

by

OH HO JUN



ABSTRACT

In this thesis, an improved L-Expressnet is proposed supplementing a counter and a line.

This L-Expressnet is proposed to complement the short-comings of the basic protocol which is used for the medium access in LAN. The comparison of the improved L-Expressnet in channel utilization viewpoint that of the Ethernet, Expressnet, and L-Expressnet clearly analyzed.

The result showed that the channel utilization of the improved L-Expressnet is superior to that of the other medium access control methods when the channel load is increased.



DE LA SALLE UNIVERSITY

TABLE OF CONTENTS

Declaration	i
Acknowledgment	ii
Preface	iv
1 INTRODUCTION	
1-1 Prolegomena	1
1-2 Statement of the problem	4
1-3 Scope and Delimitation	6
1-4 Significance of the Study	7
2 LITERATURE REVIEW	
2-1 Ethernet	9
2-1.1 Topology and operation of Ethernet..	9
2-1.2 Channel performance of Ethernet	13
2-2 Expressnet	15
2-2.1 Topology and operation of Expressnet	15
2-2.2 Channel performance of Expressnet ..	22
2-3 L-Expressnet with LEXA module	23
2-3.1 Topology of L-Expressnet with LEXA	24
2-3.2 Channel performance of L-Expressnet.	31
3 RESULTS AND DISCUSSION	
3-1 Introduction and Operation of proposed L-Expressnet with modified LEXA module ...	34
3-2 Analysis of Channel Performance in Proposed L-Expressnet	41
3-3 Comparison among Ethernet, Expressnet, L-Expressnet and proposed L-Expressnet ...	45
4 CONCLUSION AND FUTURE DIRECTIVES	
4-1 Summary	54
4-2 Conclusion	55
4-3 Recommendation	57



DE LA SALLE UNIVERSITY

APPENDICES

ONE - Definition of Terms	58
TWO - List of Figures	61

REFERENCES	63
------------------	----

