READABILITY OF AMPLITUDE MODULATION (AM) TRANSMITTER AND RECEIVER LABORATORY MANUAL

Thesis presented in partial fulfillment for the award of the Bachelor in Electrical Engineering (Hons) UNIVERSITI TEKNOLOGI MARA



MOHD SHAHRUL RIDZUAN BIN ZANA ABIDIN 2009832824 Faculty of Electrical Engineering UNIVERSITI TEKNOLOGI MARA 40450 Shah Alam, Malaysia JULY 2012

ACKNOWLEDGEMENT

The special thanks go to my helpful supervisor, Dr Mohamad Fahmi Bin Hussin. The supervision and support that he gave truly help the progression and smoothness of the final year project 1 and 2. The co-operation is much indeed appreciated. My grateful thanks also go to both Mr Hamizan Bin Yon and Mr Safuan. A big contribution and hard worked from this people during the 28 weeks is very great indeed. All works during the project would be nothing without the enthusiasm and imagination from all of you. Besides, this final year project makes me realize the value of working together as a team and as a new experience in a working environment, which challenges us every minute. Not forget, great appreciation goes to the rest of my friends that help me from time to time during the project. The whole progress really brought us together to appreciate the true value of friendship and respect of each other.

ABSTRACT

Engineering students in university generally have laboratory session which is related with their subject in that particular semester. UiTM FKE Communication students are all required to par take a laboratory session regarding AM transmitter and receiver. A study by Mohamad and Hamizan (2011) suggest that many students fail to understand the laboratory manual. In the research, a 15 items questionnaire was developed and administered to 66 Electrical Engineering (Communications) students. Further analysis indicates that many students not read the laboratory manual prior to laboratory sessions. In addition, the results indicate that 49.5% of student that did read the manual but failed to understand the lab sheet instructions. Both parametric and non-parametric analyses have yield unequal distribution in reading and understanding the lab sheet, thus implying a disparity in distribution between reading and understanding the lab sheet. Following this, there are ongoing efforts to improve the current AM transmitter and receiver lab sheet. Previous research indicate that the lack of procedure, the structure of the manual lab and the complexity of the words or phrase using in manual are the main factor students don't seem to understand the lab. By using readability software's, the readability factor can be identified. It is hoped that with review made on the manual, the student will find it easier to read and understand the laboratory as a whole.

TABLE OF CONTENTS

CHAPTER		LIST OF TITLE	PAGE	
		DECLARATION	t	
		DEDICATION	ii	
		ACKNOWLEDGEMENT	iii	
		ABSTRACT	iv	
		TABLE OF CONTENTS	v	
		LIST OF FIGURES	vii	
		LIST OF TABLES	viii	
		LIST OF SYMBOLS AND ABBREVIATIONS	ix	
1.0	INTRODUCTION			
	1.1	Introduction	1	
	1.2	Aim of Research	2	
	1.3	Scope of Study	3	
	1.4	Organization of Thesis	4	
2.0	LITH			
	2.1	AM Transmitter	5	
	2.2	AM Receiver	9	
	2.3	MATLAB	13	
3.0	MET	THODOLOGY		

3.1	Introduction	14
3.2	Project Methodology	15

		3.2.1 Final Year Project 1 (Fyp 1)	15		
		3.2.2 Final Year Project 2 (Fyp 2)	16		
	3.3	Flesch Reading Ease	17		
	3.4	Flesch-Kincaid Grade Level	18		
	3.5	Gunning Fog Score	20		
	3.6	Software Development	21		
4.0	0 RESULT AND DISCUSSION				
	4.1	Initial Lab Manual	23		
	4.2	Proposed Lab Manual	25		
	4.3	Result From Matlab	28		
		4.3.1 Flesch Reading Ease	29		
		4.3.2 Flesch Kincaid Grade Level	30		
		4.3.3 Gunning Fog Index	31		
		4.3.4 Comparison All Method	31		
5.0	CONC	CLUSION	32		
6.0	RECOMMENDATIONS FOR FUTURE WORK				
	REFERENCES				

APPENDICES

Appendix A

Appendix B

Appendix C

Appendix D