CONTENTS

DEDICATION	Ι
ACKNOWLEGDMENT	II
ABSTRACT	III
المستخلص	IV
LIST OF FIGURES	IX
LIST OF TABLES	Х
GLOSSARY	XI
ABBREVIATIONS	XIV
Chapter One: Introduction	
1.1. Introduction	1
1.2. Research Problem	1
1.3. Research Objectives	2
1.4. Research Scope	2
1.5. Research Methodology	2
1.6. Thesis Organization	3
Chapter Two: Foss Concepts And Guidelines	
2.1. Introduction	4
2.2. Definitions Of Free Open Source Software (FOSS/FLOSS):	
2.2.1. Free Software Foundation (FSF)	4
2.2.2. Open Source Initiative (OSI)	5
2.2.3. International Open Source Network (IOSN)	5
2.3. General Guidelines for FOSS Policies:	
2.3.1. Choosing FOSS	7
2.3.2. Acquiring FOSS	8
2.3.3. Using FOSS	8
2.3.4. Managing FOSS Community	8
2.3.5. Supporting FOSS	9
2.4. FOSS Development Phases	9
2.5. Examples of some existing development models	
2.5.1. Bazaar Model	13

2	.5.2. Organizational Models	14
2	.5.3. Task-related Models	15
2.6. N	Aanaging of FOSS Newer Versions (Releases):	
2	.6.1. Release Management	17
2	.6.2. Types of Release Management	18
2	.6.3. Release Management Strategies	18
2	.6.4. Managing of FOSS Releases (Versions)	19
2.7. Is	ssues For Developing Countries	19
2.8. C	Chapter Summary	21
Chap	oter Three: Managing The Development of FOSS Projects	
3.1. In	ntroduction	22
3.2. Tl	he Main Phases for Managing The Development of FOSS Projects:	
3	3.2.1. Specifying Project Concept	24
3	2.2.2. Choosing Project Name	24
3	2.3. Selecting and Applying The License	24
3	2.4. Publicizing and Announcing Project	25
3	2.5. Identifying Roles and Responsibilities of The Team members	26
3	2.6. Starting The Early development of The Project	27
3	2.2.7. Contributing The Early development	28
3	2.2.8. Managing the Development of The Project	28
3	2.2.9. Availability of Documentation	30
3	2.2.10.Managing of FOSS Newer Releases (versions)	30
3.3. F0	OSS Release Management:	
3	3.3.1.Preparation of Stable Releases	32
3	3.3.2.Release management policies across FOSS projects:	
	3.3.2.1.Release Manager	33
	3.3.2.2.Release Numbering(Versioning):	
	3.3.2.2.1. Release Number Components	35
	3.3.2.2.2. Descriptive label or Qualifiers	36
	3.3.2.2.3. The Even/Odd Strategy	37

3.3.2.3.Pre-release Testing	37
3.3.2.4.Approval of Release	37
3.3.2.5.Distribution of Release	38
3.3.2.6.Release Packaging	38
3.4. Technologies for Release Management:	
3.4.1. Communication Channels	39
3.4.2. Version Control Systems	
3.4.2.1. Selecting Version Control System	39
3.4.2.2. Some Examples Of Version Control System	41
3.4.3. Bug Trackers	42
3.5. Chapter Summary	42
Chapter Four: FOSS Release Management in Sudanese Universities	
4.1. Introduction	43
4.2. Developing FOSS in Sudan	43
4.3. Practical Case Study:	
4.3.1. Selecting FOSS Project:	46
4.3.2. Publicizing and Announcing project	47
4.3.3. Identifying Team Members	48
4.3.4. Preparation of Release	50
4.3.5. Managing and Releasing the Development:	
4.3.5.1.Distribution of Tasks between Developers	51
4.3.5.2.Coordination between Team Members	51
4.3.5.3.Pre-release Testing	52
4.3.5.4. Preparation of Stable release	52
4.3.5.5.Release Packaging	52
4.4. Results and Assessment of Case Study	
4.4.1. Developing and releasing the TMS system	53
4.4.2. The Assessment of the case study	54
4.4.3. Results and Findings	56
4.5. Chapter Summary	59
Chapter Five: Conclusion And Recommendation	
5.1. Conclusion	60

5.2. Recommendations	61
REFERENCES	63
APPENDIX	66