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A WEB BASED ENVIRONMENT FOR BUILDINGS' LIFE CYCLE COST ANALYSIS

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A project report submitted in partial fulfillment of the
requirements for the award of the degree of
Master of Science (Construction Management)

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Especially dedicated to my late Dad & Mom

(I never forget what you did for me, May God bless you)

And to my beloved siblings

Ata

Rahmat

Habib

Aref

& Mojgan

(You are the most precious things I have in this world, Love you all)

Masoud, 2009

ACKNOWLEDGEMENT

The author wishes to express his sincere appreciation to all who have helped directly or indirectly in his Masters Project research work. A big thank is to the project supervisor, Dr. Arham Abdullah, for his passionate assistance, and concern. With his invaluable advices and superb directions, the author has successfully completed his Masters Project. It is indeed a true honor and privilege for being able to work under the supervision of such a dedicated and enthusiastic lecturer.

Special thanks are due to Prof. Dato' Ir. Dr. Siti Hamisah Bt Tapsir for her close guidance and assistance throughout the process of carrying out the research work.

Last but not least, the author would like to express his heartfelt gratitude to his family members and friends for their utmost support and motivation throughout this research work. My thanks to them all.

ABSTRACT

For choosing the best choice of construction between various alternatives of a significant project, we should consider not only initial construction costs but all operational, maintenance and service costs during whole life cycle of that project. This broadened prospective to include operation, maintenance, repair, replacement and disposal costs in addition to design and construction costs of a construction project is called Life Cycle Costing (LCC). LCC process involves tedious cost calculation and needs various local and accurate inputs, so in this study a web-based environment is proposed based on Life Cycle Cost for Multi-Storey Housings software (LICCOMS) to calculate LCC process by having access to various online websites in order to get the accurate data from appropriate sources. At the end, the Data Flow Diagram (DFD) of web based LICCOMS has been developed by the use of EDraw vector based diagram software. The web based environment together with the required databases can provide a platform for developing a Malaysian website which will facilitate local building design professionals to appraise the life cycle performance of Building developments in Malaysia.

ABSTRAK

Dalam memilih pembinaan yang terbaik diantara pelbagai projek pembinaan, kita bukan sahaja mempertimbangkan kos pembinaan awalan, tetapi segala operasi,penyelenggaraan dan kos perkhidmatan di sepanjang perjalanan projek juga dipertimbangkan. Prospektif yang luas yang merangkumi operasi, penyelengaraan, pembaikan, penggantian dan kos penyelesaian serta rekabentuk dan kos pembinaan ini dipanggil Kos Kitaran Hayat Pembinaan.(LCC). Proses LCC melibatkan pengiraan kos yang meletihkan dan memerlukan pelbagai input yang banyak dan tepat, maka dalam kajian ini satu persekitaran berasaskan web akan dicadangkan berdasarkan Kos Kitaran Hayat LICCOMS untuk mengira proses LCC. Proses ini dihasilkan dengan mendapatkan capaian daripada pelbagai sumber atas talian dalam memastikan data yang diperolehi adalah tepat. Setelah itu, DFD bagi persekitaran berasaskan web LICCOMS telah dibangunkan dengan menggunakan perisian EDraw. Persekitan berasaskan web yang dibangunkan ini akan menjadi platform terbaik bagi membangunkan sebuah laman web untuk pembinaan di Malaysia. Laman web ini akan memudahkan perekabentuk tempatan untuk menilai prestasi kitaran hayat pembangunan bangunan di Malaysia.

TABLE OF CONTENTS

Chapter	Description	Page
	TITLE	i
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	iv
	ABTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	xi
	LIST OF FIGURES	xii
CHAPTER 1	**INTRODUCTION**	
	1.1 Introduction	1
	1.2 Background of Study	3
	1.2.1 Life Cycle Costing (LCC)	3
	1.2.2 Various IT Tools	4
	1.2.3 LICCOMS (The Only Malaysian LCC Software)	5
	1.3 Problem Statement	6
	1.4 Objectives of Study	6
	1.5 Scope of Study	6
	1.6 Methodology	7

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction 8
2.2 Historical Background 8
2.3 Life Cycle Costing in the Construction Industry 10
2.3.1 What is Life Cycle Costing? 10
2.3.2 Importance of Life Cycle Costing 11
2.4 Life Cycle Costing Mathematical Approach 16
2.5 Life Cycle Costing Methodology 19
2.6 Difficulty with Applying Life Cycle Costing 25
2.7 Life cycle assessment (LCA) in life cycle costing (LCC) 27
2.8 Life cycle costing (LCC) and life cycle assessment (LCA) IT tools and methods 30
2.8.1 LCC tools without LCA 30
2.8.2 LCC methods with LCA 32
2.8.3 LCA Methods and Tools 33

CHAPTER 3 METHODOLOGY

3.1 Introduction 49
3.2 Research Process 49

CHAPTER 4 LICCOMS

4.1 The Life Cycle Cost for Multi-Storey Housing (LICCOMS) 51
4.1.1 Life Cycle Cost Analysis Module 52
4.1.2 Model Builder Module 53
4.1.3 Service Life Prediction 54
4.1.4 Sustainable Rating 56

4.2 Web based and Standalone Application 57

4.2.1 Standalone Application 57
4.2.2 Web based application 58
4.2.3 Standalone and Web based Comparison 60

CHAPTER 5 A WEB BASED ENVIRONMENT FOR LCC

5.1 Proposed Web based Environment for LICCOMS 63

5.2 Benefits of Potential Web Based LICCOMS Environment 64
5.3 Remote Databases 65

5.4 Data Flow Diagram of Standalone LICCOMS 67
5.4.1 Open New Building Form > Open Standard Block (Option1) 68
5.4.2 Open New Building Form > Open Component Estimation (Option 2) 71
5.4.3 Open Existing Building Form 73
5.5 Data Flow Diagram of LICCOMS' Web Based Environment 74
5.5.1 Land Cost Calculation 75
5.5.2 Total Initial Cost 76
5.5.3 Financial Options 77
5.5.3 Service Life Prediction 78

CHAPTER 6 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion 79
6.2 Recommendations 79

REFERENCES 81

APPENDICES 84

LIST OF TABLES

Table No.	Title	Page
2.1	Expected Value of Cost of Compressor Replacement	24
2.2	Risk Analysis-Simulation	24
2.3	LCC IT tools for the construction sector	36
2.4	Sustainability assessment and LCA methods and tools	40

LIST OF FIGURES

Figure No.	Title	Page
2.1	State Legislation	5
2.2	Total Life Cycle Cost	14
2.3	Total Cost concept and Total Cost distribution in building construction	15
2.4	Hospital LCC	25
2.5	LCC for a Typical Office Building	26
2.6	Decision-Maker's Impact on Total Facility Costs	27
2.7	Relationship between LCC Saving and Implementation Time	30
2.8	LCC Analysis	30
2.9	LCC Analysis	36
2.10	Problems with LCC	38
3.1	Methodology Flow	39
4.1	Modules in LICCOMS	42
4.2	The Model Builder User Interface	51
4.3	The User Interface of Service Life Prediction Module	53
4.4	how web based application works today	55

4.5	Thick client model	57
4.6	Web based application	64
5.1	A web based environment for LICCOMS	67
5.2	Land Cost Calculation in web based DFD of LICCOMS	67
5.3	Total Initial Cost in web based DFD of LICCOMS	67
5.4	Financial Options in web based DFD of LICCOMS	67
5.5	Service Life Prediction in web based DFD of LICCOMS	67