



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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MONA MAGHRABY



Cairo University

DESIGN OF BUFFER-LESS THREE DIMENSIONAL (3D) NETWORK ON CHIP (NoC) ROUTERS

By

Marwa Mohamed Zaky Shaheen

*A thesis submitted to the
Faculty of Engineering at Cairo University
in Partial fulfillment of the
Requirements for the Degree of*
MASTER OF SCIENCE

in

Electronics and Communications Engineering

Faculty of Engineering, Cairo University
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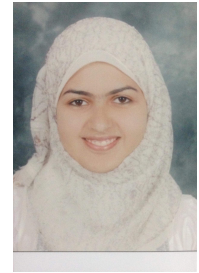
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Title of Thesis:

Design of Buffer-less Three Dimensional (3D) Network on Chip (NoC) Routers.

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Summary:

In this work brief introduction to network on chip is included. Followed by an introduction to the architecture of CONNECT and related work in buffer-less router designs. Next, this work presents Modified CONNECT buffer-less router architecture that targets FPGA. A discussion on 3-dimensional network pros and cons is introduced followed by simulations of 3D-Modified CONNECT. Later, a brief study is introduced that discusses the optimum size and feature of 3D NoC. Finally, A CAD tool is presented that summarize the work and enables the user to configure different buffer-less 3D NoCs.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute. I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name

Date

Signature

Acknowledgement

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Table of Contents

LIST OF TABLES	vi
LIST OF FIGURES	vii
NOMENCLATURE	ix
ABSTRACT	x
1 CHAPTER 1: INTRODUCTION	1
1.1 FPGA vs ASIC	1
1.1.1 Cost	1
1.1.2 Time to market	1
1.1.3 Reconfigurability	2
1.1.4 Design Cycle	3
1.1.5 Summary	3
1.2 Why network on chip on FPGA	3
1.3 Why network on chip	4
1.4 Network topologies	5
1.5 Network metrics	7
1.6 Soft NoC or Hard NoC	8
1.7 Switching Techniques	8
1.7.1 Circuit Switching	8
1.7.2 Packet Switching	11
1.8 Flow Control	11
1.9 Routing	12
1.10 Unicast and multicast Routing	13
1.11 FPGA architecture	14
1.12 Power Consumption	15
2 CHAPTER 2: LITERATURE SURVEY ON THE BUFFERED NOC	17
2.1 Simple Router architecture	17
2.1.1 Buffering	17
2.1.2 Arbiter	17
2.1.3 Allocator	17
2.1.4 Fault tolerance	18
2.2 CONNECT	19
2.2.1 FPGA resources	19
2.2.2 CONNECT generator	20
2.2.3 Router architecture	21
2.2.4 Simulations	23
2.2.5 Parameters	23
3 CHAPTER 3: COMPARATIVE STUDY OF BUFFER-LESS NOC	25
3.1 BLESS Architecture	26
3.2 Chipper Architecture	27
3.2.1 Permutation network	27

3.2.2	Golden Flit	28
3.3	MinBD Architecture	29
3.4	SCEPTER	30
3.4.1	SMART INTERCONNECT	30
3.4.2	Routing Logic	31
3.4.3	The Highest priority source ID	31
3.4.4	Throttling techniques	31
3.4.5	Opportunistic Bypassing	32
3.5	Carpool	33
3.5.1	Forking Flits	33
3.5.2	Merging Flits	33
3.5.3	Router Architecture	34
3.6	Hoplite	34
3.6.1	The crossbar	35
3.6.2	Result	36
3.7	Debar	36
3.8	SLIDER	37
3.9	Cascade	39
3.10	Q-BLESS	40
3.11	Opensource simulators	41
3.11.1	Noculator	41
3.11.2	Booksim	41
3.12	Network metrics in Buffer-less Networks	41
4	CHAPTER 4: BUFFER-LESS MODIFIED CONNECT ROUTER FOR 2D AND 3D NOC	42
4.1	Modified CONNECT	42
4.1.1	Performance Analysis	45
4.1.2	Hardware Analysis	46
4.2	Introduction to Three Dimensional Networks	48
4.2.1	Performance and Dynamic Power	48
4.2.2	Physical design	50
4.3	Three-dimensional Modified CONNECT	52
4.3.1	Routing algorithm	52
4.3.2	Router Architecture	53
4.3.3	Discussion	54
4.3.4	Simulations and Results	55
4.4	Flit Structure and testbench	56
5	CHAPTER 5: CAD TOOL FOR THE 3D NOC PARAMETERS OPTIMIZATION	58
5.1	Optimum Size	58
5.1.1	Optimum Size of Square 2D Mesh	58
5.1.2	Optimum Number of Tiers	58
5.1.3	Optimum Number of 3D Routers	58
5.2	CAD TOOL	61
5.2.1	The execution flow of the CAD Tool	65
6	RECOMMENDATIONS FOR FUTURE WORK	68

7	DISCUSSION AND CONCLUSION	69
8	BIBLIOGRAPHY	71
A	APPENDIX A	74
A.1	TCL Command	74
A.2	Matlab	74
A.3	Verilog	77

List of Tables

1.1	Cost Function [15]	5
1.2	Topologies metrics N is the number of nodes[6]	7
1.3	Traffic patterns s_i i-th bit of the source and d_i i-th bit of the destination [7]	8
4.1	Area and Power Analysis	47
4.2	Performance Analysis	56
4.3	Area Utilization	56

List of Figures

1.1	ASIC Cost Analysis [1]	2
1.2	Time to Market Cost [11]	2
1.3	Design Cycle [38]	3
1.4	FPGA vs. ASIC [10]	3
1.5	Buses and networks	4
1.6	Average Network Latency in NoC [29]	5
1.7	Network Topology[18]	6
1.8	Throughput Load Plot	7
1.9	Hard Router Area Composition Starting from the bottom: Input module crossbar, switch allocator, VC allocator, and output module[12]	9
1.10	Soft Router Area Composition Starting from the bottom: Input module crossbar, switch allocator, VC allocator, and output module[12]	10
1.11	FPGA Architecture	14
1.12	FPGA 7 series [2]	15
1.13	Logic cells [2]	15
1.14	Static power vs. Dynamic power [3]	16
1.15	Multi-gate Structure [37]	16
2.1	Arbiters[41]	18
2.2	Separable output first allocator[4]	19
2.3	Wavefront allocator [13]	20
2.4	CONNECT Generators [45]	21
2.5	CONNECT Router [45]	22
3.1	BLESS Architecture [44]	27
3.2	Edge Routers in Chipper NoC	28
3.3	Chipper permutation network [20]	28
3.4	MinBD Flit Sorting Algorithm [21]	30
3.5	MinBD router architecture [21]	30
3.6	Scepter router architecture [17]	32
3.7	Opportunistic Bypassing [17]	32
3.8	Carpool router architecture [30]	34
3.9	Hoplite Crossbar [40]	35
3.10	Debar Architecture [25]	36
3.11	Slider Architecture [19]	38
3.12	Percentage of deflected flits [19]	38
3.13	Cascade Router Architecture[39]	39
4.1	CONNECT Router [45]	42
4.2	Deflection Unit	44
4.3	Proposed Allocation Logic	44
4.4	Another Architecture to the Allocation Unit	44
4.6	Load Latency Curve	45
4.5	Modified CONNECT waveform	45
4.7	Traffic Evaluations for Network-Level Throughput	47
4.8	Average Network Latency vs. Injection rate	47

4.9 Deflection rate for Buffer-less Designs	48
4.10 3D Manufacturing [32]	50
4.11 Comparison of 3D connections [32]	51
4.12 Area occupied by TSV [42]	51
4.13 2D Packaging	52
4.14 2.5 Packaging[5]	52
4.15 Modified CONNECT in 2D and 3D NoC	53
4.17 3D Buffer-less PERM [16]	54
4.16 CONNECT Router [45]	54
4.18 Flit Structure of CONNECT	56
4.19 Flit Structure of BLESS	57
5.1 Optimum Size for Square 2D mesh	59
5.2 Optimum Number of Tiers	59
5.3 Optimum Number of Three-Dimensional Routers	60
5.4 Routers Indices in 4x4 Mesh Network[45]	61
5.5 The GUI of CAD Tool	62
5.6 Network code received by mail	62
5.7 Performance	62
5.8 Walkthrough example	64
5.9 Routing tables Created by the CAD Tool	67