

# **SIMULATION OF SINGLE-PHASE INVERTER OPERATION USING SINGLE PHASE MATRIX CONVERTER TOPOLOGY**

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Bachelor of Electrical Engineering (Hons.)

**UNIVERSITI TEKNOLOGI MARA  
MALAYSIA**



**MASNIE LALU  
FACULTY OF ELECTRICAL ENGINEERING  
UNIVERSITI TEKNOLOGI MARA  
40450 SHAH ALAM,  
SELANGOR, MALAYSIA**

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## **ABSTRACT**

In this report the Single-phase Matrix Converter (SPMC) is presented to operate as an inverter. The well-known Sinusoidal Pulse Width Modulation (SPWM) technique was used to synthesize the output waveform. Safe commutation strategy was implemented to avoid voltage spikes due to inductive load. The development of a computer simulation model using MATLAB/Simulink is presented to verify the behavior of single-phase inverter operation using single phase matrix converter.

# TABLE OF CONTENTS

| CHAPTER  | DESCRIPTION                                                   | PAGE     |
|----------|---------------------------------------------------------------|----------|
|          | TITLE                                                         | i        |
|          | SUPERVISOR'S APPROVAL                                         | ii       |
|          | DECLARATION                                                   | iii      |
|          | ACKNOWLEDGEMENT                                               | iv       |
|          | ABSTRACT                                                      | v        |
|          | TABLE OF CONTENTS                                             | vi - vii |
|          | LIST OF FIGURES                                               | viii - x |
|          | LIST OF TABLES                                                | xi       |
|          | LIST OF ABBREVIATIONS                                         | xii      |
| <b>1</b> | <b>INTRODUCTION</b>                                           |          |
|          | 1.0 Introduction                                              | 1        |
|          | 1.1 Objectives                                                | 2        |
|          | 1.2 Scope of Work                                             | 2        |
|          | 1.3 Methodology                                               | 3        |
|          | 1.4 Organization of Thesis                                    | 4        |
| <b>2</b> | <b>MATRIX CONVERTER</b>                                       |          |
|          | 2.0 Introduction                                              | 5        |
|          | 2.1 Single Phase Matrix Converter (SPMC)                      | 5 - 6    |
|          | 2.2 Switching Strategy of SPMC                                | 6 - 8    |
|          | 2.3 Insulated Gate Bipolar Transistor (IGBT)                  | 8        |
|          | 2.4 Bi-directional Switch                                     | 9 - 10   |
|          | 2.5 Conclusion                                                | 10       |
| <b>3</b> | <b>PROPOSED SINGLE PHASE MATRIX<br/>CONVERTER AS INVERTER</b> |          |
|          | 3.0 Introduction                                              | 11       |
|          | 3.1 DC to AC Single Phase Matrix Converter                    | 11 - 12  |
|          | 3.1.1 Switching Strategies of DC to AC converter              | 12       |
|          | 3.2 Inverter Operation of SPMC                                | 13 - 14  |

|          |                                            |         |
|----------|--------------------------------------------|---------|
| 3.2.1    | Sinusoidal Pulse Width Modulation          | 14 - 15 |
| 3.2.2    | Commutation Problem                        | 16      |
| 3.2.3    | Commutation Strategy of Inverter           | 16 - 17 |
| 3.3      | Conclusion                                 | 17      |
| <b>4</b> | <b>MODELING AND SIMULATION</b>             |         |
| 4.0      | Introduction                               | 18      |
| 4.1      | SPMC Configuration Circuit                 | 18 - 19 |
| 4.1.1    | SPWM Generator                             | 19 - 20 |
| 4.1.2    | Commutation Generator                      | 20      |
| 4.1.3    | Output                                     | 20      |
| 4.1.4    | Simulation Parameter                       | 21      |
| 4.2      | Conclusion                                 | 21      |
| <b>5</b> | <b>RESULTS AND DISCUSSION</b>              |         |
| 5.0      | Introduction                               | 22      |
| 5.1      | Resistive Load                             | 22-24   |
| 5.2      | Resistive Load with Commutation            | 24 - 27 |
| 5.3      | Inductive Loads                            | 27 - 30 |
| 5.4      | Inductive Loads with Commutation           | 30 - 33 |
| 5.5      | Filter implementation                      | 33      |
| 5.4.1    | Resistive Load with Filter                 | 34 - 33 |
| 5.4.2    | Resistive Load with Filter and Commutation | 34 - 39 |
| 5.4.3    | Modulation Index and Switching Frequency   | 40 - 41 |
| 5.4.4    | Total Harmonic Distortion (THD)            | 41 - 42 |
| 5.6      | Conclusion                                 | 42      |
| <b>6</b> | <b>CONCLUSION</b>                          |         |
| 6.0      | Introduction                               | 43      |
| 6.1      | Future Development                         | 43      |
|          | <b>REFERENCES</b>                          | 44 - 45 |
|          | <b>APPENDICES</b>                          | 46 - 57 |