

UNIVERSITI TEKNOLOGI MARA

**TIDAL DATUM TRANSFER BY
USING SIMULTANEOUS
OBSERVATION METHOD BASED
ON VARIATION OF DISTANCES IN
SEMI-DIURNAL AREA**

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Thesis submitted in fulfillment
of the requirements for the degree of
**Bachelor of Surveying Science and Geomatics
(Hons)**

Faculty of Architecture, Planning and Surveying

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AUTHOR’S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Tides differ from location to location. A fixed offset from another datum usually used to define the chart datum for a certain area. As the datum is important to start the survey, the datum may be obtained by transfer the tidal datum from the control stations. Therefore, the chart datum can be defined by using several methods such as simultaneous observation method, levelling height difference and others. This research is aim to determine the optimum distance for the tidal datum transfer. It specifically studies in the semi-diurnal area along the west coast of Peninsular Malaysia. It is based on the data obtained from the tidal observations at the site area which is in Kg. Baru, Lumut and obtained from JUPEM for the control stations. There are four control stations were used which are Langkawi, Penang, Lumut and Port Klang stations. The data was analysed to compute the tidal datum from the variation of control stations distances and estimate the accuracy of the datum transfer from the control stations. The research suggested that the most accurate value of tidal datum transfer is the shortest distance of control stations and the site area. The results of the study also showed that the seafloor profile also affect the accuracy of the datum transfer. It is hope that the study can contribute to the improvement of tidal datum transfer in semi-diurnal area and also in diurnal area.

TABLE OF CONTENT

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	v
ACKNOWLEDGEMENT	vi
TABLE OF CONTENT	vii
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
CHAPTER ONE INTRODUCTION	1
1.1 Introduction	1
1.2 Research Background	1
1.3 Research Gap	2
1.4 Problem Statement	5
1.5 Aim	5
1.6 Objectives	5
1.7 Research Questions	6
1.8 Scope of Study	6
1.9 Thesis Outline	7
CHAPTER TWO LITERATURE REVIEW	9
2.1 Introduction	9
2.2 Tide in Malaysia	9
2.2.1 Semi-diurnal tide	11
2.2.2 Diurnal tide	12
2.3 Type of Tidal Cycle	14
2.3.1 Spring tide	14
2.3.2 Neap tide	14
2.4 Tidal Datum	15

2.4.1	Mean Higher High Water	16
2.4.2	Mean High Water	16
2.4.3	Mean Tide Level	16
2.4.4	Mean Low Water	16
2.4.5	Mean Lower Low Water	16
2.4.6	Chart Datum	17
2.4.7	Sounding Datum	18
2.5	Applications of Tidal Datum	18
2.6	Datum Transfer Method	19
2.6.1	Conventional Method	19
2.6.2	GPS based Method	23
2.7	Tidal Control Stations	23
2.8	Estimating Accuracies of Tidal Datum in short term observation	25
2.8.1	Swanson Error Analysis Report	25
2.8.2	Bodnar Report	25
CHAPTER THREE RESEARCH METHODOLOGY		27
3.1	Introduction	27
3.2	Research Methodology	27
3.3	Preliminary Study	29
3.4	Data Collection	30
3.4.1	Equipment used	30
3.4.2	Study Area	31
3.5	Data Processing	32
3.6	Software	34
3.6.1	Microsoft Excel	34
3.6.2	Google Earth	34
3.7	Result and Analysis	35
CHAPTER FOUR RESULTS AND ANALYSIS		36
4.1	Introduction	36
4.2	Tidal Observation Data at the Control Stations and Site Area	36
4.3	Tide by Tide Comparison	37