THE EFFECT OF ELEVATION ON THE COMPUTATION OF SOLAT TIME

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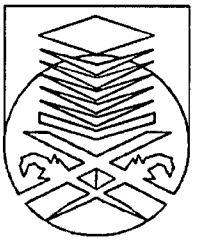

Thesis submitted to the Universiti Teknologi MARA Malaysia in partial fulfilment for the award of the degree of the Bachelor of Surveying Science and Geomatics (Honours)

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DECLARATION

I declare that the work on this project/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA (UiTM). This project/dissertation is original and it is the result of my work, unless otherwise indicated or acknowledged as referenced work.

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ABSTRACT

This area was chosen for research study because of places confined to the Meridianal time zones used as the basis of Computation are having exceptional variations in elevation with a notable difference in latitudes and as well as terrain slope. Pahang has 11 districts and 6 prayer time zones and this study was conducted in 3 areas in Pahang State. The data used for the calculation of prayer times is location and elevation at Genting Highlands, Genting Sempah and Janda Baik, Pahang. This area was chosen for research because it has high latitude, low latitude and high slope areas. Solat time depends on the position of the sun compared to the point on the surface of the Earth. The data used for the computation of solat time is elevation data as well as data from the Jabatan Kemajuan Agama Islam Malaysia (JAKIM) and the Jabatan Mufti Negeri Pahang. The software used to process the data is ArcGIS and also Microsoft Office Excel. ArcGIS is used to determine the longitude and latitude for each study area and while Microsoft Office Excel is used to computed the solat time for the longitude and latitude removed from the ArcGIS. In computing the prayer time using Microsoft Office Excel the formula used to compute the solat time is based on the formula from JAKIM. The results of the count will be compared with two types of open data such as JAKIM and Mufti Pahang are intended to see the difference in solat minutes for the place. The difference in solat time is done based on the coordinate reference for each zone for the three areas with the coordinates that have been calculated. The results of the computation shows the difference in solat time that affect from the elevation.

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