

GRAPHICAL USER INTERFACE DEVELOPMENT TO DETERMINE
EARTH MAGNETIC FIELD BASED ON MAGDAS

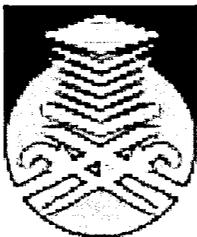
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DETERMINE EARTH MAGNETIC FIELD BASED ON MAGDAS**

**Thesis presented in partial fulfillment for the award of the
Bachelor Engineering (Hons) in Electrical of
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ABSTRACT

Phenomena such as explosions on the sun create storms of radiation, fluctuating magnetic fields and swarms of energetic particles which travel through solar wind. At the moment they arrive at earth, they interact in complex ways with earth magnetic field. Some space weather storms can damage satellites, disable electric power grids and disrupt cell phone communication systems. This project focuses on collect the Magnetic Data Acquisition System (MAGDAS) data and develops GUI to extract the data. The MAGDAS data taken from MAGDAS station which is located at Langkawi. A graphical user interface (GUI) is a graphical display that contains devices, or components, that enables a user to perform interactive tasks. GUIDE, the MATLAB Graphical User Interface development environment, provides a set of tools for creating graphical user interfaces (GUIs). These tools simplified the process of laying out and programming GUIs in PQ disturbance event. GUI Layout: Using the GUIDE Layout Editor, it is populated a GUI by clicking and dragging GUI component. It is also created menus and context menus for GUI. From the Layout Editor, it can size the GUI, modified component look and feel, aligned component, set tab order a Hierarchical listed of the component objects and set GUI options. The final result shows the graph magnitude (tesla) versus time (h). The observation and conclusion from the final result can be made. There are many advantages using GUI to execute MAGDAS compare to conventional way. GUI is easier to use and less time to execute. Besides that, the parameter H, D, Z and F can be shown at the same time. The conventional way need many step to fill and take much more time to process the original MAGDAS data.

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