UNIVERSITI TEKNOLOGI MARA

LOCATION-BASED VERIFICATION OF *BURUNG WALIT* PREMISE USING SPATIAL DATABASE SYSTEM

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ABSTRACT

This project is to develop a Geographic Information System (GIS) component in *Burung Walit* Premises Monitoring System (BWPMS) for Department of Veterinary Services (DVS) under Ministry of Agriculture and Agro-Based Industry Malaysia. It aims to design a spatial data model pertaining to *burung walit* premises' location as the enhancement from the physical data model of the existing system and to develop a Geographic Information System (GIS) component using Google Maps' web mapping application. There are four phases involved to materialize the project which are understanding the existing system, re-designing new system, verification and validation process of new system and lastly the development of new application itself. The project uses Extreme Programming (XP) as system development methodology. Analysis on the user requirement and sample data provided have produced the re-designed of business modeling by using Unified Modeling Language (UML) and spatial Entity-Relationship (E-R) model. The new system developed using the re-designed of spatial data model and enhanced with Google Maps as web mapping services provide more efficiency in locating and visualizing location of *burung walit* premises. Hence, it facilitates DVS in monitoring *burung walit* premises in the event of animal diseases caused by bird.

Keywords:
Spatial data, Data model, Web mapping, Geographical Information System

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