Development of a Land Property Registry System Application and Dynamic Database Management for Web-based GIS Mapping: A Case of Butuan City, Philippines

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Abstract: This paper describes preliminary results in developing a dynamic database management system for a customized application on land property registry system and web-based GIS mapping and report generation. These two applications, desktop and web, will give an advantage of viewing an up-to-date registered real property units (RPUs) and will aid in prompt monitoring of RPUs and real property tax payments. The tools utilized for this study were UMN MapServer, integrated with POSTGIS and PostgreSQL, which was used together with VB.Net® 2008 and MapWindowsGIS applications. The plausibility of combining these powerful tools lead the researchers to the development of the Land Property Registry System and Land Property Mapper, which are both desktop applications and all attributes and geometric properties are dynamically updated in the PostgreSQL database. PHP and Javascript programming will then be employed in order to make these updated RPU data be dynamically displayed in the web-maps through the use of Content Management System for web mapping applications like Drupal®.

Keywords: GIS, real property unit, MapServer, PHP