

# Using Open Source Web-Based GIS for Publishing and Querying Cadastral Information in Long Xuyen City, An Giang Province, Vietnam

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**Abstract:** Nowadays, Web-based GIS or WebGIS is becoming an effective tool for sharing, querying and analyzing geographic information. By using Internet GIS applications, users may view, query, analyze and download spatial information from anywhere at anytime. The cadastral dataset, like any other GIS dataset, consists of spatial components and associated attribute information. Solution for publishing the cadastral dataset via the internet is one of the most important tasks in land management in many local provinces and WebGIS is the best choices. In this paper, the system of WebGIS for displaying cadastral information of Long Xuyen city, the second largest city in the Mekong Delta, Vietnam, was built on the open source WebGIS with three-tiers architecture. The cadastral data are imported and stored in PostGIS which is support for geographic objects to the PostgreSQL object-relational database. The server-tier includes Apache HTTP server and GeoServer mapserver. OpenLayer and GeoExt are used for client application. The cadastral map including spatial and non-spatial data is published through the internet based on Open Geospatial Consortium (OGC) standards including: Web Map Service (WMS) and Web Feature Service (WFS). The cadastral officers in commune divisions can use the web browsers, namely Internet Explorer, Mozilla Firefox, etc. to access the cadastral data stored and managed in data-tier and server-tier.

Keyword: Web-based GIS, cadastral information, Long Xuyen city, Open source.