Integrating SMS and Application Programming Interface (API) for Web-based GIS Mapping of Real Property Units of Butuan City, Philippines

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Abstract: This study illustrated a technique of integrating Open-source Geographical Information System (GIS), Google® Application Programming Interface (API) Technology and SMS Integrated System for real estate property assessment and mapping through an interactive user interface. Geospatial data and significant information (such as land owners, land area, assessed value etc.) were incorporated to create a summarized data of property assessment through Google Fusion Table merging functions. Fusion Table (FT) supported GIS by converting .shp file (shapefile format) into .kml format in order to express visualization within web-based and two-dimensional maps. Since the Google FT has the ability to generate html code to display creative and interactive map, it enabled access of map by embedding this html code into the web page created for this web mapping service. The Graphical User Interface (GUI) of the web-based system was created and programmed in PHP and Javascript language. While, the SMS notification system was developed with the aid of SMSLibX from ActiveX component of Visual Basic® 6.0 Framework in order to perform SMS-related functions within Nokia® PC Suite environment. Thus, the integration of these technologies led to the development of an interactive web-mapping service and easy notification system for real property owners and city assessor.

Keywords**:** GIS, Google API, Nokia PC Suite, Javascript, PHP