

A Prototype of SVG Map of Land and Building Tax Objects in Indonesia

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Key words:

SUMMARY

The Directorate of Land and Building Tax, the Ministry of Finance has already created digital maps of most of the big cities in Indonesia. The aim was to build a GIS of land and building tax objects, and later to increase tax revenue. The systems, named as SIG-PBB, were put on the district level. SIG-PBB uses MapInfo and Oracle as its core software. Tax payers have no access to the systems, and they rely on the invoice letter from the directorate to know how much money they have to pay. The availability of extensive spatial and attribute data in the SIG-PBB were invaluable assets for the improvement of public services. The idea was to put the SIG-PBB on the internet and let the tax payers know in advance the amount of money to be paid to the government. The Scalable Vector Graphic (SVG) was used as the file format of the prototype system.

The prototype system uses real data from the City of Yogyakarta. The digital maps were converted into ArcView shapefile. All attribute data, such as the tax payer, tax object number (NOP), selling value of tax object, width, type of land and/or building were extracted from the Tax Object Information Systems. The next step was to design the components of the SVG map. The first page was the whole coverage of the City of Yogyakarta. It composed of the maps the whole sub-district. User can interactively choose their option via mouse-click on the map. They will be directed towards map of villages, which consists of the block maps. Block maps were a certain area, usually not too large, defined by the Tax office as a basis for tax survey. In the block maps, user could browse the information regarding their tax objects. A Security tools have been proposed to prevent un-authorized user getting information of others' tax information. The security systems uses tax payer's name as the login name and 18 digit of tax object number as the password.

The prototype systems of SVG map of land and building tax was interactive and relatively small file size. It was not depend on any proprietary format and could be viewed using MS Internet Explorer or Netscape Navigator equipped with free SVG viewer plug-in. Security system and option could be set using JavaScript programming. Online measurement tools allow the user to their land or building dimension, and therefore provide a checking mechanism for the tax office. Any tax-related information could be simply embedded to the systems via web programming.

BIOGRAPHICAL NOTES

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Researches:

2004: Principal Investigator: Development a Mobile Mapping Systems for Agricultural Application

2004: Co-Investigator: Development of An Interactive Web-based Tourism Map of Sermo Using Scalable Vector Graphic

2003–2004: Co-Investigator: Methodology Development for Spatial Modeling to Predict Impact of Land Subsidence Using Geo-information Technology, Case Study Semarang City, Central Java

2003: Co-Investigator: Developing 3D GIS Model for Virtual City Exploration, Part of the Semarang City.

Selected publications:

Vitriani, Heri Sutanta, Sumaryo, Diyono, 2003, The Application of Remote Sensing and GIS for Coastline Change Monitoring (in Indonesian), National Seminar on Research and Development, Semarang, 16 December

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