ABSTRACT

GEOGRAPHIC INFORMATION SYSTEM WEB-BASED WATER RESOURCES CASE STUDY ON RESEARCH AND DEVELOPMENT CENTER FOR WATER RESOURCES BANDUNG

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Research and Development Center of Water Resources in Bandung is one of the agencies under the Ministry of Research and Development Board of Public Works to process the information on Water Resources and is responsible for providing complete information on inundated data to the public. But in its information management processes such as process view of spatial data (maps) still use the tool (tools) for example static map sketched on paper and carried out the scanning process and data management processes non-spatial (attribute) is still done conventionally in the form of documents (paper) which was considered less effective.

Geographic Information Systems Water Resources design and development using object oriented software (OOP) based framework using tools (tools), UML (Unified Modeling Language), with software development using Microsoft Visual Studio website. NET Framework 3.5 with ASP programming model. MVC NET languages C # and software map server using ArcGIS Server and ArcGIS Desktop.

In the test phase using the Alpha method of testing (black box) and Beta methods (questionnaires), and as for the implementation of this system is that the Geographic Information System application is running as expected as presenting spatial data in the form of maps, showing statistical data Water Resources authentication users, processing of non-spatial data (data attributes), searches the data and attribute data and map printing. In general, based on test results explained that the Geographic Information System can be received and very helpful staff of Water Resources Research and Development Center, Bandung in particular and society in general and as a medium of information to the public regarding water resource data.

Keywords: Geographic Information System, Water Resources, Framework, UML (Unified Modeling Language), ASP.NET, MVC, ArcGIS Server.