APPLICATION WEBGIS FOR ARCHAEOLOGICAL SITE  
(CASE STUDY: DELTA BRANTAS)

Student Name  : Berliani Apriga Nur Fadilla  
NRP   : 3508 100 070  
Departement  : Teknik Geomatika FTSP-ITS  
Supervisor : Prof. Dr. Ir. Bangun Muljo  
Sukojo, DEA, DESS.

ABSTRACT

Delta Brantas was the center of Kahuripan/Jenggala and Majapahit kingdom around 11th until 16th century. The civilization could be proven by the existence of sites in the district of Sidoarjo. These archaeological heritage has historical value and science. The lack of information about those archaeological heritage will affect damage or even loss of archaeological heritage.

This research uses GIS tools for mapping the archaeological sites. Along the development, GIS is currently develop based on Web so that with WebGIS-based information, it is expected to be an alternative tools to help Balai Pelestarian Peninggalan Purbakala (BP3) East Java to manage the archaeological sites data and information media as an effort to preserve the heritage of archaeological sites. The data used as a base map is RBI Indonesia map scale 1:25.000 and tabular data about the archaeological sites from BP3 East Java.

The results obtained from the making of this information system of this archaeological sites is an interactive web-based application that can show archaeological sites in the district of Sidoarjo. There are total 16 locations of archaeological sites, with other archaeological remains such as fragments, lingga and peripih. Based on viewer data at 2010, we found out that Candi Pari and Candi Sumur was the most visited archaeological site.

After analyse the result of ArcGIS, it shows that the farthest distance among the archaeological sites is the location
between Candi Tawangalun and Kedungklinter. And the nearest distance is between Candi Pamotan I and Candi Pamotan II. Using ArcGIS we could also find the farthest and the nearest distance between archaeological sites and bus station. The farthest distance is between Purabaya Station and Kedungklinter site, the nearest distance is between Krian station and Chinese Temple Teng Swee Bio. While for the farthest distance between train station and archaeological sites is between Tarik Sation – Tawangalun as for the nearest is between Krian Station - Chinese Temple Teng Swee Bio.

Key words : WebGIS, Archaeological Sites, Delta Brantas