WEB GIS APPLICATION FOR INDIAN PRIME MINISTER’S RURAL ROAD PROGRAMME

Sajeevan G, Associate Director, C-DAC Pune, India

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Introduction

PMGSY – *Pradhan Mantri Gram Sadak Yojana* – Prime Minister’s Rural Road Programme.

Launched by the Govt. of India to provide all weather road connectivity to unconnected rural habitations

- Poverty alleviation
- Access to market
- Employment
- Health care
- Education
- …..
History

2005 - 2006

Web - ASP.Net, MapXtreme

Sandalone - VB.Net, ArcEditor
Current Status – PMGSY National GIS

Pradhan Mantri Gram Sadak Yojana (PMGSY – Prime Minister’s Rural Road Programme) was launched by the Government of India as part of a poverty reduction strategy to provide all-weather road connectivity to unconnected habitations. Geospatial Rural Road Information System (GRRIS) is a Geographical presentation of PMGSY. GRRIS seeks to provide every citizen, even in the remotest corner, of this country to visually see on a simple map, the details of the rural roads and roads improved/covered under the PMGSY scheme in a particular Block, District and State. It also provides locational information of habitations, markets, administrative headquarters etc, which will help in better decision making of the resident communities of a rural area and development of rural markets & enterprises.

The application uses data from heterogeneous databases. It performs queries and display dynamic spatial information using the live national level OMMAS database. GRRIS dynamically displays the data updated in the external MIS database. Based on user interactions, the Web GIS application generates thousands of possible outputs; therefore, you may take a look at the online help.

Select state and click proceed
Andhra Pradesh
Proceed
PMGSY National GIS
PMGSY National GIS

http://pmgsy-grris.nic.in

+ Live non-spatial database integration (MIS-GIS)

+ Like a standalone GIS

- GIS engine: No Transaction (WFS-T)

http://omms.nic.in
Online Geospatial Transaction System (FOSS)
Pradhan Mantri Gram Sadak Yojana (PMGSY) was launched by the Government of India to provide connectivity to unconnected habitations in order to provide continuing access to economic and social services thus increasing the agricultural incomes, employment and other economic opportunities for the rural population. PMGSY-III envisages consolidation of the existing Rural Road Network launched with the primary objective of consolidation of the existing rural road network by up gradation of existing through routes and major rural links that connect habitations to rural agricultural markets, higher secondary schools and hospitals. GeoSadak enables collating, managing, online spatial data quality report, editing and serving geospatial data in real time. System will be utilized by all the state government departments and ministry of rural development for new road proposal, upgradation, monitoring and management.
Web Service / Web API

Benefitted habitations:- extracted using spatial analysis *(MIS list has limitations)*
Simulation for Road Prioritisation - Tracemap

For PMGSY III, to facilitate identification and prioritization of roads

Algorithm based on shortest route and on parameters of population served, agricultural market, educational and medical facilities
Maps4HTML
(Suggestions)
Latitude / Longitude – for understanding

- WGS84 ellipsoid/datum

- Geodetic latitude at a location is the angle between the equatorial plane and a line normal to the reference spheroid

- For spatial accuracy

HTML Map Viewer
HTML Map Viewer
HTML Map Viewer

- Globe view like Google Earth
- Location and scale aware
- Avoid the standard map projections and implement on-the-fly projection at the viewer
- Raster, vector, Web data service
- Spatial accuracy for interoperability
- ...
HTML Map Viewer

- Web API
- Cyber Security, trustworthy data, data security, availability
- Authentication / privilege
- International Projection/datum – How to prioritize?/select one?
- Expect enormous contributions from the developer community
- Geospatial-data-as-a-service could be the next big business opportunity
THANK YOU!

sajeevan@cdac.in

https://www.researchgate.net/profile/Sajeevan_G

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