

Development of Community GIS

Mumbai Development Plan

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Introduction

- What is Geographical Information System(GIS)?
- Why we need GIS?
- When should we use GIS?
- Who can use GIS?
- How can community contribute to GIS?

Problem Statement



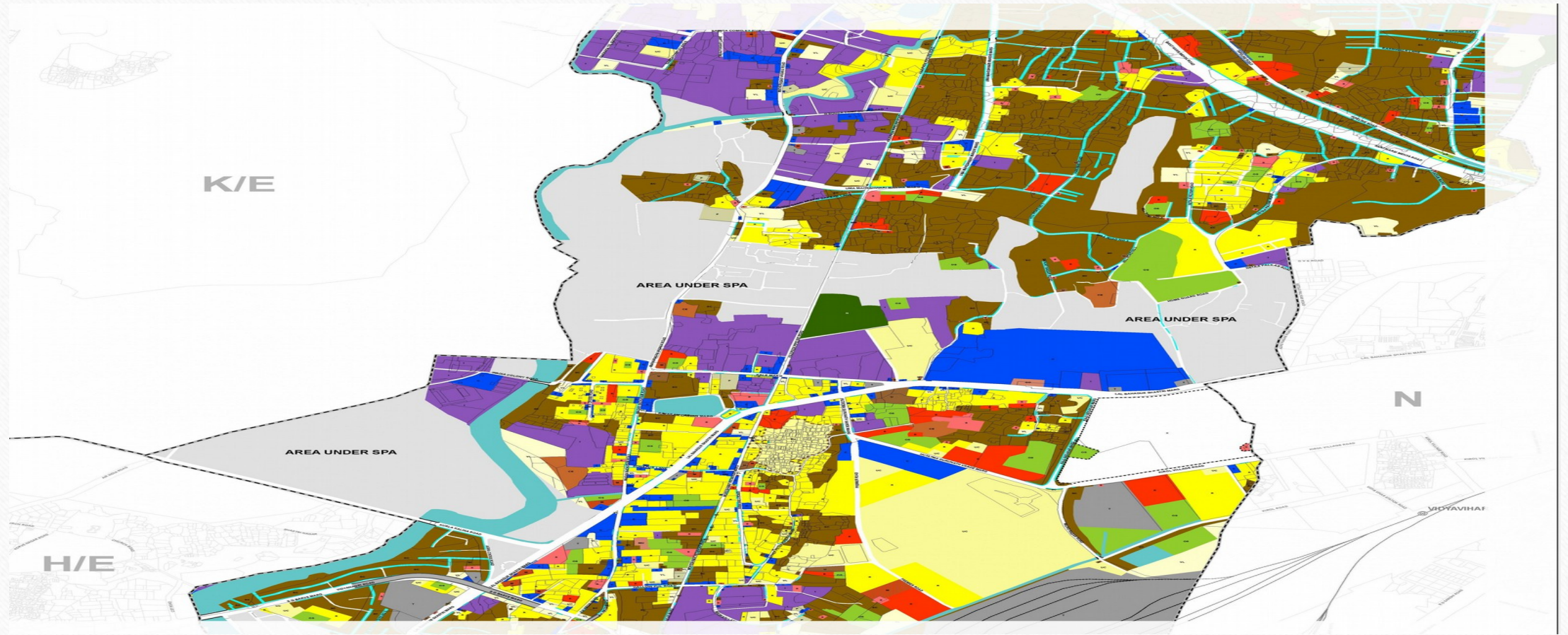
To build Community based GIS Infrastructure to:

- Consume the information created based on government and community data
- To contribute to the information inputs known to the local citizens
- To report grievances of a specific area to authorities
- To collaborate among citizens on several common issues.

Need of Proposed System

- BMC has come out with development plan for 2014-34 which has many inconsistencies. There is no way for the community to understand the plan as it is in the form of fragmented pdf's. Also there is a section in the proposed plan which requires community participation.
- So our project provides a platform where citizens can understand the various aspects of the plan and the community can contribute to the proposed development plan.

Example L Ward Part 4



Scope of the project

Development of a GIS based Infrastructure which will be able to provide various information:

- Maps which shows the existing entities and amenities
- Proposed amenities
- Spatial data can be easily understood by citizens.
- GIS based infrastructure to help people to use and contribute information from different domains as well as review them.
- Rating based system of the existing amenities.

Layers

- Proposed amenities: Schools, colleges; roads; toilets; hospitals; gov buildings; land use
- Existing amenities : Schools, colleges; roads; toilets; hospitals; gov buildings; garbage dumps; land use; places of worship.

Literature Survey

- The Ministry of Urban Development based plan (150 towns) called AMRUT [Atal Mission for Rejuvenation and Urban Transformation] .
- Bhainsa Municipality in the Telangana state (36 sq km) also has tried to use the GIS based maps to help in creating the city master plan.
- GD_Chiplunkar Report which provides revised draft for development plan.
- Maharashtra Regional and Town Planning Act, 1966 wherein development of land for various factors were mentioned.

Literature Survey

- Public participatory GIS in community-based disaster risk reduction.
- GIS-based Master Plan Formulation for India
- The Horror of Urban Development in India – Identifying The Real Issues

Hardware and Software Requirements

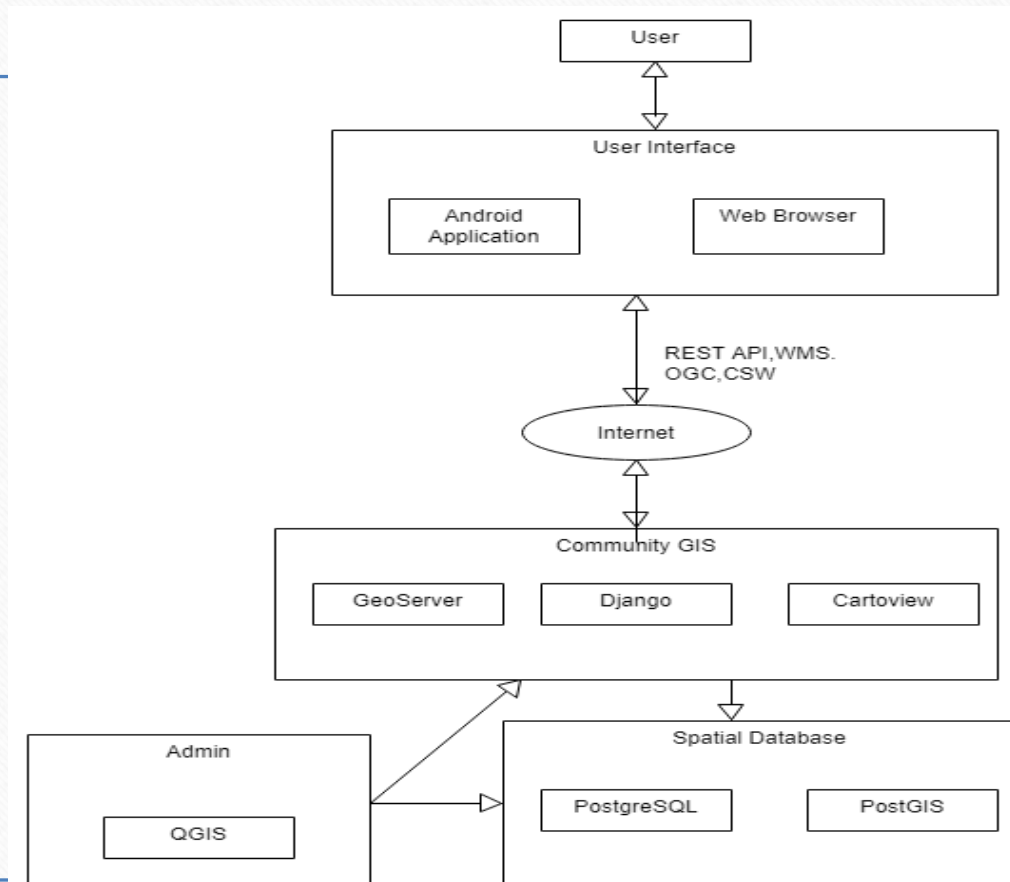
Hardware Requirements

- 8 GB of RAM
- 2.2 GHz processor
- 1 GB software disk usage
- 100 GB for Deployment
- 64 bit hardware

Software Requirements

- Ubuntu 16.04
- QGIS
- Geonode
- Cartoview
- Geoserver
- Postgresql and Postgis
- Community Gis Android Application

System Architecture



Demonstration

References

- The Horror of Urban Development in India –Identifying The Real Issues Sebastian Morris W. P. No. 2017-06-01 June 2017, research publication Indian institute of management Ahmedabad.
- Mumbai development plans documents,
<http://www.mcgm.gov.in/irj/portal/anonymous/qlddevplan>
- Urban Design Research Institute Project Home Page
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References

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<http://www.sra.gov.in/data/250209mrtpact.pdf>
- Tender notice https://tender.eprocurement.gov.in/html/offline_tenders.asp
Accessed date 16th Aug 2017
- Geo Node Open Source Content Management System <http://geonode.org/>
- A free and Open Source Geographic Information System. <http://www.qgis.org/en/site/>
- Spatial and Geographical Objects for PostgreSQL <http://postgis.net>

Any Questions?
