
INDEPTH WebGIS

An Open Source GIS Application (WEBGIS) for Health and Demographic Surveillance System

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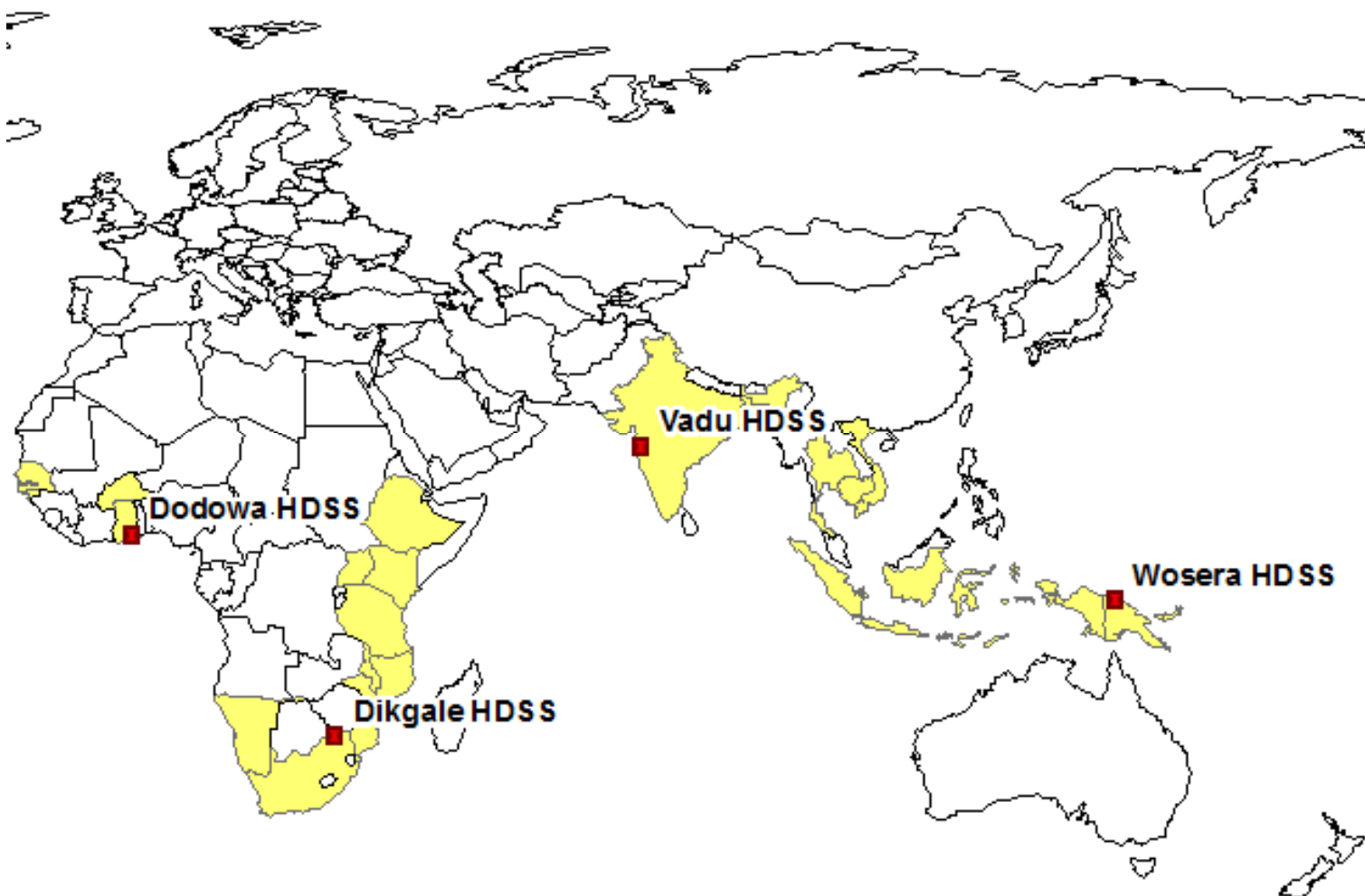


Introduction

- ❖ WebGIS is the latest advancement in GIS technologies that brings spatial information via internet.
- ❖ WebGIS extends GIS technology to the mobile workforce, increasing the accuracy and value of field data collection.
- ❖ WebGIS stores heterogeneous datasets, indexed by location and make them widely available in a visual, dynamic and interactive format.



Participating Sites



Aim and Objectives

Aim:

To introduce the potential of an open source GIS application to enable INDEPTH member centers to strengthen their health and demographic surveillance system.

Objectives:

- ❖ To develop a WebGIS Application for INDEPTH member centers to enhance their data collection capabilities by creating an interactive WebGIS using an open source web application
- ❖ To enable the sites to publish their maps and data on web.



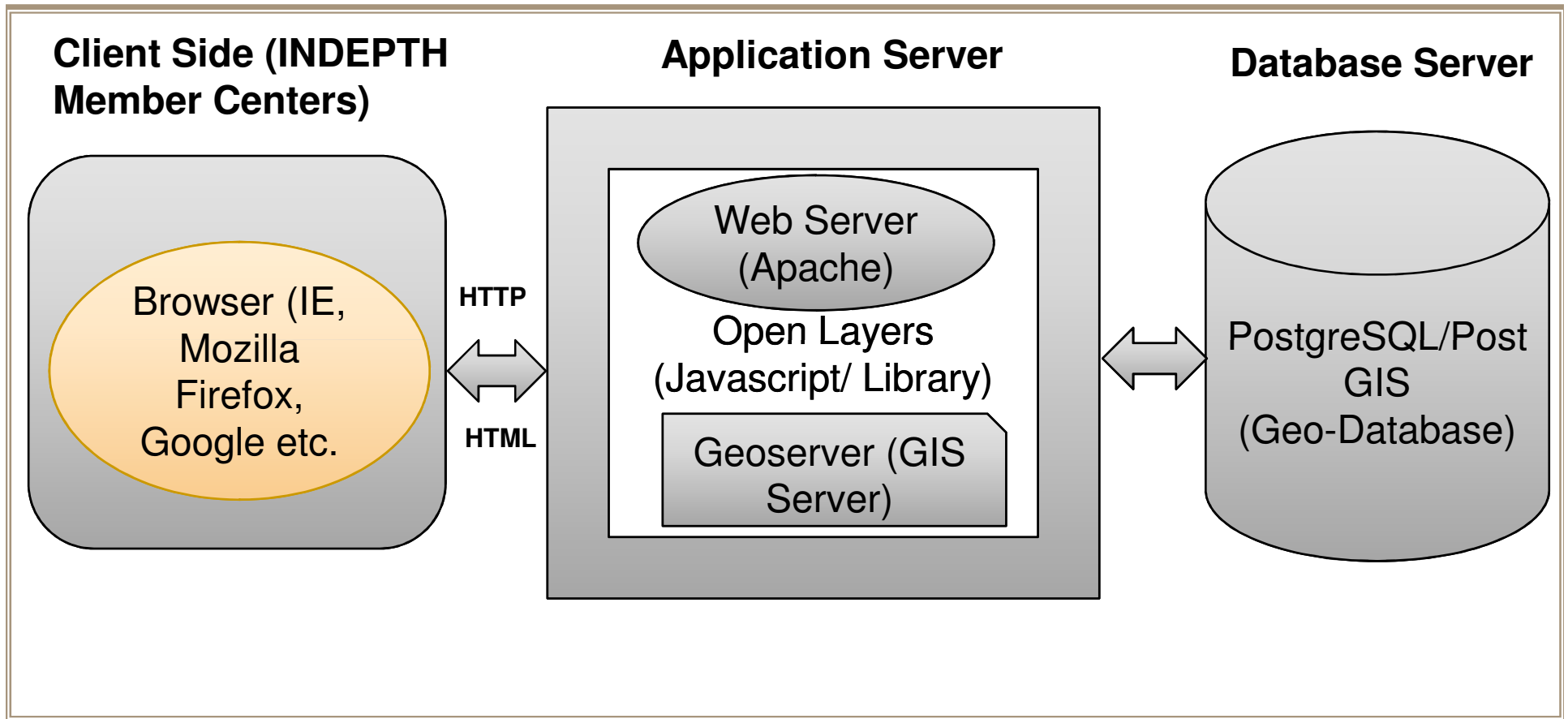
WebGIS Components

- ❖ Spatial Data
- ❖ Non Spatial Data
- ❖ PostGIS database (Geo-database)
- ❖ Geoserver (Open source WebGIS software)
- ❖ Openlayers (Client side script for displaying maps)

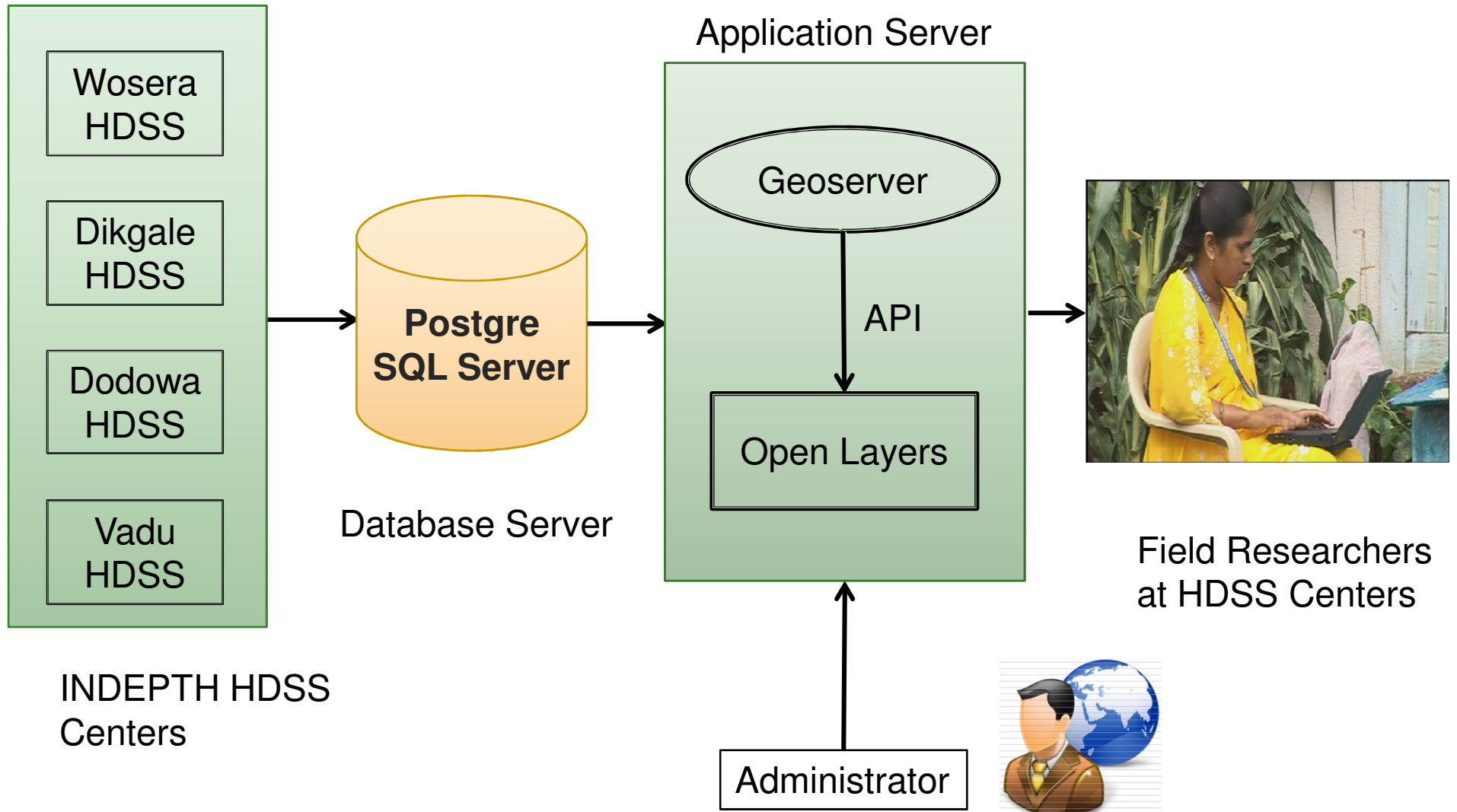


WebGIS Architecture

3 Tier Client-Server Architecture



The Application



Advantages

- ❖ The WebGIS application is customized using an **open source software**
- ❖ The application is **platform independent**.
- ❖ The application is **interactive** enabling the user to access information, navigate and interact with the map through static or dynamic queries.
- ❖ The application allows the HDSS center to **publish its maps and HDSS data** on the web through a centralized data source thereby removing the burden of maintaining copies of same datasets.
- ❖ The user can develop this application further as per their requirements.



Demonstration



Challenges

- ❖ As different centers use different platforms for managing their respective data, it becomes difficult to use a single application for all centers. Each application would need to be customized on case to case basis. We understand that we could address this if we use INDEPTH resources like iSHARE.
- ❖ Since the data is being published at household level on web there is a possibility for a breach in the confidentiality. To avoid such breach in security, the center can restrict the access.



Future Plans

- 1) After implementing the application at the four HDSS member centers it will be extended further to the other member centers of INDEPTH Network.
- 2) The application will be further developed for real time data collection and updating information at regular intervals of time.
- 3) Additionally, the application will be customized for generating queries for multiple layers.
- 4) Also, a network analysis tool will be developed to identify the shortest approachable routes between two locations.



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Thank You!



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