GIS FOR POWER SYSTEM

Abstract

A **geographic information system (GIS)**, **geographical information system**, or **geospatial information system** is any system that captures, stores, analyzes, manages, and presents data that are linked to location(s). In the simplest terms, GIS is the merging of cartography, statistical analysis, and database technology. GIS may be used in remote sensing, land surveying, natural resource management, agriculture, urban planning, emergency management, landscape architecture, navigation and localized search engines.

Therefore, in a general sense, the term describes any information system that integrates stores, edits, analyzes, shares, and displays geographic information for informing decision making. GIS applications are tools that allow users to create interactive queries (user-created searches), analyze spatial information, edit data, maps, and present the results of all these operations.

Purpose

The power generated at various power generating stations across the state of Karnataka involve a complex mesh of transmission lines starting at generating stations and ends at the consumer, between these two points many transformers and grids exist. Currently we use traditional methods which involve many complexities, as such the traditional system of mapping though reliable are not efficient enough.

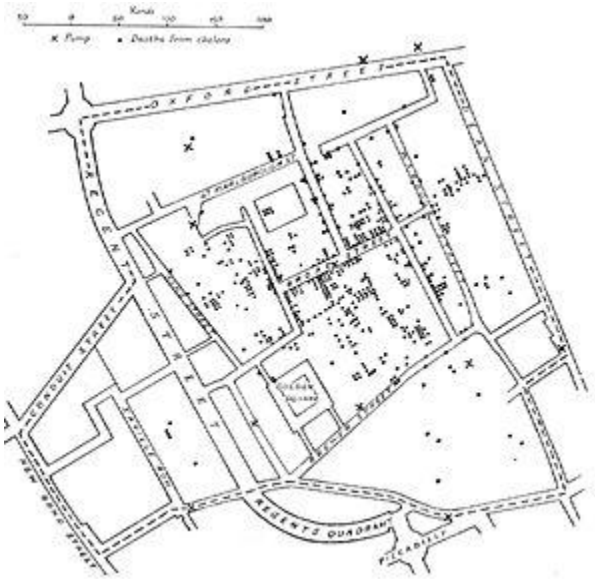
Hence this field is a suitable area to use GIS and hence make power transmission more efficient and reliable than traditional methods, since GIS allows us to view the transmission from the generation point to consumer. And hence analyze where power is being Under-utilized and where power is being consumed more (POWER THEFT).

Also allows us to make the path of electric lines more efficient using shortest path and we can analyze where new power generation plants may be required in accordance to the geographic location.

Users can find out information required by them using the digitized map, making work easier and more efficient.

Users of the system:

- Students /Research Teams
- Various departments of the government
- Farmers
- Military



This map shows the areas affected by Soho cholera outbreak in London using GIS.

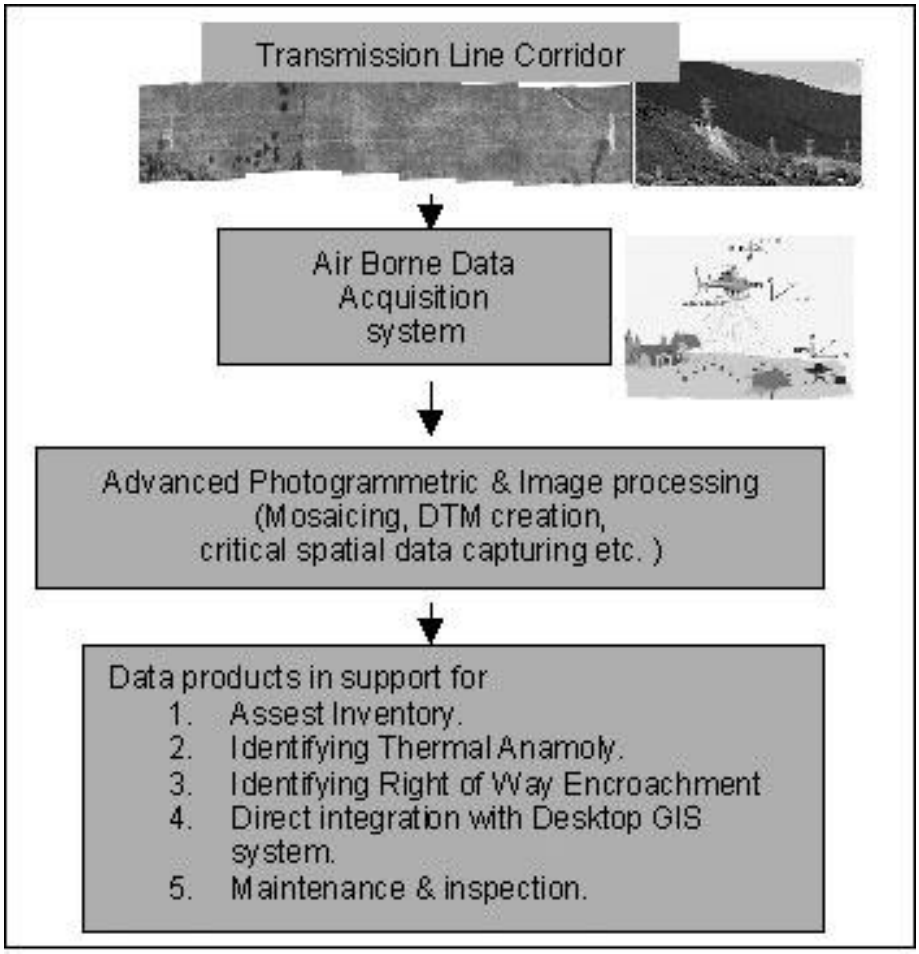
Functional requirements:

1. Database to hold various data require
2. Topographic map of the location where GIS is to be used
3. Digitized map with boundaries
4. GIS software

Non-functional requirements:

1. Portability
2. Security
3. Detailed Representation will be highly useful in the future

System architecture:



Technologies to be used:

SQL, Microsoft Excel, GIS Software (RGIS)

Team members:

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Note:

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