INTRODUCTION

Tourism is one of the industries with the strongest effect on the economy because it helps in developing other sectors. "Tourism is a composite of activities, facilities, services and industries that deliver a travel experience, that is, transportation, accommodation, eating and drinking establishments, entertainment, recreation, historical and cultural experiences, destination attractions, shopping and other services available to travelers away from home. GIS has been commonly used in different fields including tourism, enabling people from different countries and cultures to interact with each other. Tourism is a way of conserving the environment, creating jobs and promoting cultures. Tourism has the potential of becoming the highest generator of foreign currency. Cross river is a state in Nigeria with various tourist attractions which can be identified, mapped and database created for them if the tourist sites can be identified. Hence this paper demonstrates these capabilities of GIS for effective tourism inventory in Cross River state to make it known and readily accessible so that people can have information about them.
STATEMENT OF PROBLEM

The use of Geographic Information System for tourism inventory within Cross River state is pertinent because of the unavailability of up to date digital tourism spatial database for proper utilization of tourism.

AIM OF THE STUDY

The aim of the study is to create a spatial database for tourism inventory in Cross River State using the technology of Geographic Information System.
OBJECTIVES OF THE STUDY

The objectives of the study include:

1. Database design
2. Geometric data acquisition
3. Attribute data acquisition using social survey
4. Database creation
5. Spatial analyses
6. Information presentation

Location of the study area
METHODOLOGY

Database Design

This involves three interrelated phases which are:

1. Conceptual Design
2. Logical Design and
3. Physical Design

DATA SOURCES

Primary data acquisition was done using Handheld GPS. Secondary data used for this project was the existing map of Cross River State and the Cross River State Tourism Bureau Brochure (www.crossrivertourism.com)

DATABASE CREATION

The tables for the entities were created and populated in ARCGIS and the attribute tables were linked with geometric data.
SPATIAL OPERATIONS

Spatial Analytical functions of Geographical Information System (GIS) distinguishes it from other information systems. The main objective of spatial analysis is to combine and transform geodata from various sources into useful geoinformation for decision makers.
Composite Map of the study Area

Important Tourist Sites within the Study Area
Spatial Search

Spatial search operations involve retrieving features selectively using user-defined logical conditions. A spatial search operation was performed to retrieve all natural tourist sites within the study area.

**Query 1**: Select natural tourist sites within the study area

Syntax: \([T\text{Site Class}] = \text{‘Natural’}\)
Query for natural tourist sites within the study area

Map of important Natural Tourist Sites within the Study Area
Network Analysis

The network analysis too is a vital component of a Geographic Information System software. It is use in analyzing transportation line to determine shortest and fastest routes within the network.

Network analysis is carried out to determine the routes from points on the network to a tourist’s site. The first analysis here is to simulate the optimal route a tourist will take when moving within a network from Bebi A trp Airport to Stone Circle Monoliths – a tourist site.

Best route analysis from Airport at Bebi A trp to Stone Circle Monoliths tourist site
Alternative route analysis from Airport at Bebi Airport to Stone Circle Monoliths tourist site

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>BEST ROUTE</th>
<th>ALTERNATIVE ROUTE</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bebi Airport to Stone Circle Monolith tourist site</td>
<td>166.4km</td>
<td>189.5km</td>
<td>23.1km</td>
</tr>
</tbody>
</table>
CONCLUSION

This research has been able to demonstrate the dynamic capacities of Geographic information system application in mapping, analysis and modeling of Geographic phenomenon. This will aid tourism planning authorities, tourists, and government agencies to visualize, plan and access various tourist sites in Cross River State. It will enable tourism authority to plan for security, enable government to have electronic records of the location of each tourism site and thereby enable tourist have an overview of tourism resources. It also allows for future updating of the database.

RECOMMENDATIONS

- Detailed information about tourism activities should be put in the database making them easily available and accessible.
- The tourism database should be made to cover the road network of Cross River State and updated from time to time in order to capture new developing tourism areas and facilities that are present.
THANKS FOR LISTENING