A Geospatial Website for Consulting Geographical Information in Casablanca city

INTRODUCTION

- great quantity of information
- traditional tools share this burden
- Internet as modern means for data carrier
- Internet allows several services: consult GIS services, copy parts of maps and download several kind of GIS data

METHODOLOGY

- strategies used to add GIS functionalities to the WEB:
  - ArcIMS software
    - combines data from different sources
    - Data of different formats: raster, vector
    - ArcSDE themes
    - possibilities of analysis, queries, measurement and visualization

Objectives

- Methodology: data preparation and restructuring to design a geospatial website for consulting geographic information concerning certain services located in Casablanca City such as: administrative services, shopping services and some public and private services as well.
- Using the general concepts of the deployment of geographic information via Internet.
- Design of a geospatial website that will allow consulting geographical information over the web using the ArcIMS software

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- Data preparation and processing
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METHODOLOGY

- ArcGIS software
- adds geographical dimension
- capacities of analysis that conveys with many applications: electronic trade, resource requirements planning,
- localization of services.
- Facilitates diffusion of GI via Internet managing data using tools for visualizing, analyzing and making decision as well

Example of Data file

Data preparation and processing

- Data formats: shapefiles, ArcInfo coverages, text files and geocoding data.
- Map of Casablanca city, counties, blocks of streets (base layer)
- Road Network will be used to assign the names to streets, avenues, roadway network.
- Geocoding data will be used to carry out research by address.

Data Structure varies from one theme to another zones covered by these data are not complete, missing updating some details:
- extraction and classification is a suitable group of services
- polygonal elements should be converted into point elements
- design a library of cartographic symbols to represent the services that do not have a standard symbol.

Therefore we proceed to the reorganisation of these data in order to guarantee precise and complete information.

Data preparation and design

Data Reorganisation
Results

Available Data
- Travel agencies = 94
- Counties = 36
- Insurance agencies = 127
- Banks = 162
- Blocks Streets = 7583
- Establishments = 355
- Doctors = 875
- Hotels = 25
- Restaurants = 133
- Supermarkets = 19
- Roads = 2074

Designing the Web site

- **ESTABLISHMENT OF AN ACCESS DATABASE**
  - Access database that is quite compatible with Internet specifications.
    - open the attribute tables using Excel software, make the necessary changes.
    - correct spellings errors due to the nonconformity of regional parameters.
    - create a new Access database and import the Excel files.
    - This process is applied the data base model on data of Excel tables with the original attribute tables of dBASE.

- **Map definition in ArcIMS Author**
  - Define the contents of the map to publish on the website.
  - Define the themes to use for the site,
  - Identify data
  - Order the layers
  - Define their displaying order
  - Once themes loaded, the affection of the cartographic symbols is auto.
Design of menus
- good design of menus would facilitate the communication to the user and gives the site excellent visibility and fine aesthetics.
- create a dynamic navigation menu for all public services of the same category
- four categories of services are created

Categories of services
- **First category: Points of reference**
  - movies, cultural centers, education establishments, hospitals, mosques, cafes, parks, etc.
- **Second category: Public/Private Services**
  - travel agencies, banks, private stations, rail stations, road stations, hotels, restaurants and kebabs etc.
- **Third category: Shopping**
  - commercial services of the city: supermarkets, shopping centers, pharmacies, etc.
- **Fourth category: Administrative**
  - administrations, embassies, consulates, states, counties etc.

Displaying services names
- This page displays the list of names of the available services, as rolling text.
- With a click on a given name, descriptive data are displayed.
**Consultation and localization of services:**
- The consultation is a very rapid research.
- Some auxiliary information could be found like the period of night pharmacy services.

**Localization of a service on a map:**
- A site position and permits navigating using some offered tools (like zoom in/out, displacements).

**Research and localization of addresses:**
- A very useful tool for several delivery societies, sanitary services, administrations.
- Once the address introduced by keyboard, it is automatically displayed on the map shown on the screen.

**Printing extent:**
- Prints the contents of a map extent with one click on the Print button:
  - a new page showing the map
  - a new page containing the chosen area with a legend of different themes

**Address localization**
- Then the map and the localization are shown on the screen.

**Service info**
- Print

**Conclusions**
- The result of this work reveals that Internet represents a suitable tool to deploy Geographical Data and make it accessible to large public of the community.
- Needs collaboration between several states departments.
- Constitutes a basis for diffusion of GI services.
- Meets several public needs.
- Web site is open to other developments.
- Tested successfully for Casablanca city.

**Conclusion**
- Web site is open to other developments
- Constitutes a basis for diffusion of GI services
- Meets several public needs
- Tested successfully for Casablanca city
Thank you for your Attention