



The GIS Solutions and Services on the Web

Presented by :

➤Youssef SABAN

by:

- Hassan Zili
- Idriss El ACHABI
- Khalid SBAI
- Mina AMHARREF
- Youssef SABAN


Summary

Introduction

- I. Types of GIS applications
 1. Desktop Applications
 2. Web Applications
 3. Mobile Applications
- II. Programming tools
 1. Spatial DBMS
 2. Programming language and API
- III. Applications (Telecom network & online cadastral map)
 1. Database design
 2. Demonstration

Conclusion

Types of GIS applications Programmation tools Applications **The GIS Solutions and Services on the Web**



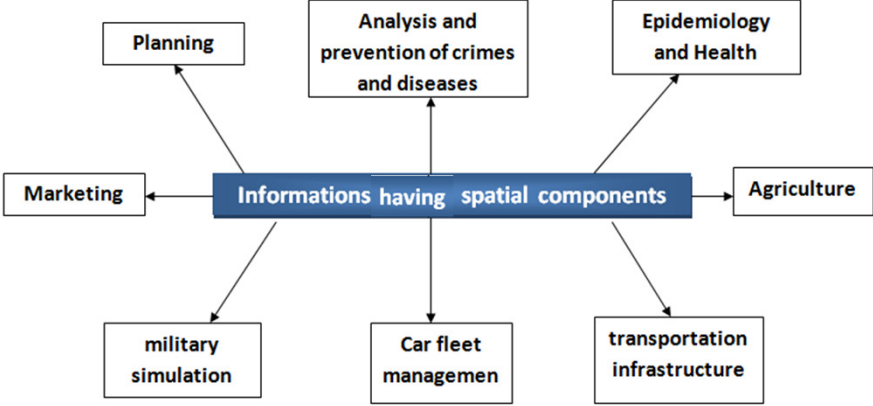
Introduction

3

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications **The GIS Solutions and Services on the Web**

Introduction



```

graph TD
    A[Informations having spatial components] --> B[Planning]
    A --> C[Analysis and prevention of crimes and diseases]
    A --> D[Epidemiology and Health]
    A --> E[Agriculture]
    A --> F[Car fleet managemen]
    A --> G[military simulation]
    
```

4

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Types of GIS applications

5

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Types of GIS applications

Types of applications

- Desktop Applications
- Web Applications
- Mobile Applications

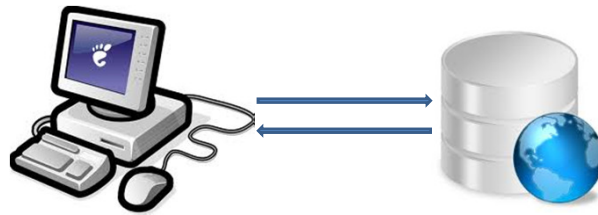
6

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications

Desktop Applications :

Runs on the user computer

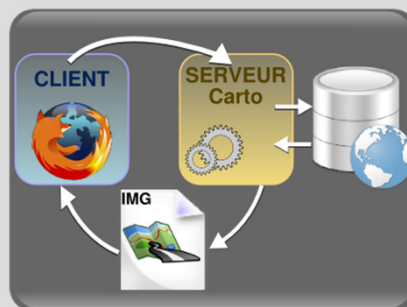


Types of GIS applications

Web Applications

Example

Web mapping is the process of designing, implementing, generating and delivering maps on the web.



Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Types of GIS applications

Mobile Applications

application software developed for small low-power handheld devices such as personal digital assistants, enterprise digital assistants or mobile phones.

9

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Types of GIS applications

Mobile Applications

10

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications **Programmation tools** Applications The GIS Solutions and Services on the Web

Programming tools


11

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications **Programmation tools** Applications The GIS Solutions and Services on the Web

Spatial DBMS

DBMS: Postgresql
Is a free and opensource database management system



12

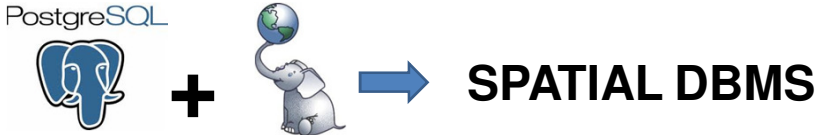
Faculté des sciences et techniques de Tanger FIG Mai 2011


Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Spatial DBMS

The spatial database extension allows definition and management of geometric attributes in database tables.

The geometry is a specific column in the table because it has associated indexes to allow spatial operations.



PostgreSQL +  → **SPATIAL DBMS**

13

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Spatial DBMS

- A spatial database : Optimized to store and query data related to objects in space, including points, lines and polygons.
- data provider: Npgsql

14

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications **Programmation tools** Applications The GIS Solutions and Services on the Web

Programming language and API

- Programming language:
 - C#.net
- SharpMap
 - It provides access to many types of GIS data, enables spatial querying of that data, and renders maps.

15

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools **Applications** The GIS Solutions and Services on the Web

Applications

16

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Applications

Database design

Quartier
Id_quartier
Nom
Zone
densité

BTS
Id BTS
Position
Rayon
Id_op
capacité

Opérateur
Id_operateur
nom

17

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Applications

Database design

Nature
id_nat
Designation

Parcelle
id_pr
Geometrie
Id_prop
Id_nat

Propriétaire
id_pr
nom

Commune
id_com
Geometrie_cm
Designation

Utilisateur
id_user
Login
Pwd

18

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools **Applications** The GIS Solutions and Services on the Web

Applications

3. Demonstration

Demo1 : [Telecom network management](#)

Demo2 : Online cadastral map

19

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools **Applications** The GIS Solutions and Services on the Web

Applications

Commune

- Tanger
- Ksar Sgher
- Melloussa
- Acouma
- ALL

Foncière

- Villa
- Immeuble
 - R+1
 - R+2
 - R+3
 - R+4
- ALL

Autres critères

Superficie: [dropdown]

Propriétaire: [dropdown]

fiche technique

20

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Applications

Online Cadastral Map

Cycle Ingénieur en Géoinformation

Commune

- Tanger
- Kasar Sgher
- Melloussa
- Acouma
- ALL

Foncière

- Villa
- Immeuble
- R-1
- R-2
- R-3
- R-4
- ALL

Autres critères

Superficie > 5000

Propriétaire: khalid sbai

➔

fiche technique

21

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Applications

Online Cadastral Map

Cycle Ingénieur en Géoinformation

Commune

- Tanger
- Kasar Sgher
- Melloussa
- Acouma
- ALL

Foncière

- Villa
- Immeuble
- R-1
- R-2
- R-3
- R-4
- ALL

Autres critères

Superficie

Propriétaire

➔

fiche technique

22

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Applications

Online Cadastral Map

Cycle Ingénieur en Géoinformation

Commune

Tanger

Kasr Sgher

Maloussa

Aouina

ALL

Foncière

Vils

Immeuble

R+1

R+2

R+3

R+4

ALL

Autres critères

Superficie > 15000

Propriétaire

➔

fiche technique

1- Superficie :
= 20000 m²

2- Dé 1- Superficie : rstratives:

* au nord par la Commune chef-lieu de Dara Guémar et la commune de Régulba

* à l'Ouest par les Communes de de Djendia et de Sid Amrane.

* au Sud par les Communes de Koussine et de Oumias.

* Et à l'Est par la commune de Hassana Abdelkerr.

23

Faculté des sciences et techniques de Tanger FIG Mai 2011

Types of GIS applications Programmation tools Applications The GIS Solutions and Services on the Web

Conclusion

24

Faculté des sciences et techniques de Tanger FIG Mai 2011



Thank you!