PostLBS

Universal WebAPI Platform for Visualizing Geospatial Analysis - Routing, Geocoding, Thematic mapping and More!

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Index

• What is “PostLBS” Platform?

• Demonstration

• Milestones
• Orkney, Inc.
  • Founded in 2002
  • Pioneer Company providing FOSS4G solutions in Japan
  • i18n Contributes to MapServer and GRASS
  • pgRouting, geocoder.ja
  • One of the largest supporters of OSGeo Japanese Chapter

• About me
  • Technical Consultant
  • Using FOSS4G tools since 2005
  • Orkney since 2007
WHAT IS POSTLBS?
What is PostLBS?

• Web API Platform for Geospatial Visualization.
Examples of Geospatial Visualization

Filtering

Categorization
Examples of Geospatial Visualization

Bubble Chart

POI within a Polygon
ARCHITECTURE
Architecture - Whole Image

PostLBS

Visualization “Basket”
- Geocoding
- Routing
- Categorizing
- etc...

Catalog File

Work on

API

Service, Format, Params
- JSON
- XML
- K/V

CLIENTS

Geospatial Data Resource

Demographic Data Resource

Other Data Resources

Orkney
• Simple URL Structure
  • Using 3 Keys for URL

http://foo.bar/BASKET/SERVICE.FORMAT?query={...}
Architecture - Hierarchy

**Formats**

- **Function A**
  - Service A

**Formats**

- **Function B**
  - Resource A
  - Service B

**Formats**

- **Function C**
  - Resource B
  - Service C

**Basket**
Architecture - Configuration Files

Format (templates)

Service

Basket

Function

Resource

Format (templates)

DB, API (e.g. google API), etc…

Data Resources

Catalog – Dataset, Columns, Type of Data Resources

catalog.xml
How to Develop Your Service

• Step 1
  • Install PostLBS

• Step 2
  • Create a “Service”
    • Code a Function as a Service class
    • Choose Resource and Format

• Step 3
  • Configure
    • Put in the Basket
Example 1

• Geocoding
  • Code a “Geocoding service class”
  • Configure Function, Resource, Service and Basket

http://foo.bar/basic/geocode_g.json?
query={"address":"横浜市西区みなとみらい3－6－3"}
Example 2

- Routing
  - Code a “Routing service class”
  - Configure Function, Resource, Service and Basket

http://foo.bar/basic/route_hcc_walk.kml?
query={"start":"139.63276,35.458281",
"end":"139.622549,35.464727",
"crs": "EPSG:4326, EPSG:4326"}
<?xml version="1.0" encoding="UTF-8"?>
<kml xmlns="http://www.opengis.net/kml/2.2">
<Document>
  <name>route.kml</name>
  <description></description>
  <Style id="lineStyle">
    ...
  </Style>
  <Placemark>
    <name></name>
    <description></description>
    <styleUrl>#lineStyle</styleUrl>
    <MultiGeometry>
      <LineString id="5746010">
        <tessellate>1</tessellate>
        <altitudeMode>clampToGround</altitudeMode>
        <coordinates>
          139.63276,35.458281
          ...
          139.632403,35.458005
        </coordinates>
      </LineString>
      ...
      ...
      <LineString id="5746007">...</LineString>
    </MultiGeometry>
  </Placemark>
</Document>
</kml>

*For the explanation, Some values and tags are omitted.
DEMONSTRATION
Demonstration

- Population of Kamakura City
- Service “Categorize”
1) Select a Service “Categorize”

2) Select a Data Resource and Input Parameters

3) Select Output Format

4) Display a Thematic Map

(behind the scroll in this shot)
Demonstration

• Finding Gas Stations along shortest-path.

• 1) Route Calculation
• 2) Buffer Creation
• 3) Finding Gas Stations

Photo by PooWho
http://www.flickr.com/photos/poorinwon/2597034041/
1. Route Calculation, Service “Route_Vehicle”

1) Select a Service and Input Parameters

2) Display a Route

3) WKT Is Output Here for Next Step
2. Calculate a Buffer Polygon along the Route, “Buffer”

1) Select Service, Format and Parameters

2) Display a Buffer

3) WKT Is Output Here for Next Step

→

1) Select Service, Format and Parameters

2) Display Gas Stations
Statistical GIS Service of Yokohama City - GIStat

http://www.city.yokohama.jp/me/keiei/seisaku/gistat/
Example - Distribution of the Elderly within a freehand Polygon
MILESTONES
Milestones

• As for Opensource Project
  • BSD style License
  • Pre-Release Version
    • http://platform.postlbs.org/

• Release Plan
  • Ver1.0 Release -> October 2010
Wrap-up

• PostLBS Platform
  • WebAPI Platform for Geospatial Visualization
  • Simple URL Structure
  • Code and Configure

• FAQ
  • Just Platform, No Providing Default Services?
  • Different from WPS?
  • Other Questions?
THANK YOU!

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