Oracle MapViewer Overview

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Oracle MapViewer

A standard feature of all Oracle Fusion Middleware editions

- Standards-based J2EE and Java Server Faces component
  - XML/HTTP, Java/AJAX
- Publish spatial data to the web
- Map and feature cache provides smooth scroll (pan, zoom)
- Rich Java, XML, JavaScript APIs provide client side interactivity
- Centrally managed map definitions, symbology, and styling rules
Map-Enriched Business Applications

Geocoding
Spatial searches
Routing
Mapping
MapViewer Architecture

- Map Cache Server
- FOI Server
- Map Rendering Engine
- Spatial Tables
- Map Definitions
- Mapbuilder
- JavaScript Map API
- Application
- JDBC
- HTTP
Integrating External Data Sources

- Oracle eLocation
- Google Maps
- Microsoft Bing Maps
- Custom Tile Servers

Application

JavaScript Map API

Map Cache Server

FOI Server

Map Rendering Engine

Map Cache

WMS

WFS

Spatial Tables

Map Definitions

Mapbuilder

HTTP

JDBC
Spatially-Enabled Applications

Oracle BI EE

Oracle Transportation Management

Phase Forward

Mobile CRM

Primavera P6 Project Management

Oracle Universal Content Management

Oracle Communications UIM
<table>
<thead>
<tr>
<th>Control Zone Name</th>
<th>Device Name</th>
<th>Device Type</th>
<th>Event State Description</th>
<th>Remedy</th>
<th>Outage Duration</th>
<th>Crew Assigned</th>
<th>Est. Rest. Time</th>
<th>Customers Impacted</th>
<th>Customers Impacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;M 7961</td>
<td>UG_92D751</td>
<td>att_ugelec_line_seg</td>
<td>CMP</td>
<td>Reset Sectionalizer</td>
<td>29 minutes</td>
<td>Mobile Crew B</td>
<td>30-AUG-08 05:43:12</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>F&amp;M 711</td>
<td>xfmo_to_O-7871</td>
<td>att_transformer</td>
<td>NFY</td>
<td>Unselected</td>
<td>0 minutes</td>
<td>***</td>
<td>31-AUG-08 05:32:51</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dodson 7581</td>
<td>ELBOW_1024121_STR_75496</td>
<td>att_elbow</td>
<td>M-CMP</td>
<td>Temporary Jumpers</td>
<td>0 minutes</td>
<td>***</td>
<td>25-AUG-08 17:58:57</td>
<td>198</td>
<td>198</td>
</tr>
</tbody>
</table>
Clicking on a facility on the map opens a detail report for that facility.
Visualising the output from Asset Maintenance plan

Thematic Maps showing analytic information. This represents the current state of the Main Line infrastructure.
Tracking of Moving Objects
Develop Applications with Java IDE
Oracle Maps: the Javascript API

```html
<html>
<head>
<script language="javascript" src="/mapviewer/fsmc/jslib/oraclemaps.js"></script>
<script language=JavaScript>
var baseURL  = "http://"+document.location.host+"/mapviewer";
function display_map() {
    var mapview = new MVMapView (document.getElementById("MAP_DIV"), baseURL);
    mapview.addMapTileLayer(new MVMapTileLayer("mvdemo.demo_map"));
    mapview.setCenter(-122.45, 37.75);
    mapview.setZoomLevel(5);
    mapview.addNavigationPanel("east");
    var foiLayer = new MVThemeBasedFOI ('customers', 'mvdemo.customers') ;
    mapview.addThemeBasedFOI (foiLayer);
    mapview.display();
}
</script>
</head>
<body onload=display_map() >
    <div id="MAP_DIV" style="left:10; top:60;width: 600px; height: 500px"></div>
</body>
</html>
```

- **Load the Oracle Maps client library**
- **Initialize and configure the map**
- **Add a dynamic theme**
- **Launch the map**
- **Automatically produce the map when the HTML page is loaded**
- **This is where the map will be generated**
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Load the Oracle Maps client library

Initialize and configure the map

Launch the map

Add a dynamic theme

Automatically produce the map when the HTML page is loaded

This is where the map will be generated
Oracle Maps is a new feature of Oracle Application Server Map Viewer. First appeared in version 10.1.3.1, Oracle Maps introduces a powerful AJAX web mapping interface to MapViewer’s core visualization capabilities. Oracle Maps provides high performance, google-style map display by caching previously rendered map tiles on the server. It also supports interactive Feature of Interest (FOI) layers that are based on database queries against Oracle Spatial. An FOI is a map feature that responds to mouse rollover with an info-tip window displaying its properties.

Oracle Maps also supports other unique features such as redlining, marquees zoom, thematic mapping, collapsible map decoration pieces inside the main map (legend, bird’s-eye-view etc), and easy integration with 3rd party WMS services and other types of map providers. All of these features are exposed through an open JavaScript API. In this tutorial you will learn and quickly get up to speed with this API.

View the Online Oracle Maps API Reference here.

For feedbacks and bug reports, please use the SpatialMapViewer discussion forum on OTN.
Instructions

This example shows how to add an overview map as a collapsible element inside the main map. You can drag the small red rectangle within the overview map to recenter the main map.

Note that when you collapse the overview map, its minimized icon will automatically disappear into the bottom edge of the map after a few seconds. If you mouse over the bottom area of the map where the minimized icon disappeared, it will reemerge so that you can un-collapse the overview map.

Source code

The JavaScript code for this demo is listed below:

```javascript
var OverviewMap = function (map) {
    var mapContainer = document.getElementById('mapCanvas');
    var mapCenterLon = -122.45;
    var mapCenterLat = 37.6706;
    var mapZoom = 10;
    var mapPos = new YMapPosition(mapCenterLon, mapCenterLat, 0, 0);
    var map = new YMap(mapContainer, mapPos, mapZoom);
    map賺ingOn();
    map earners.addLayer(map); 
    return map;
}
```
Resources

http://www.oracle.com/technetwork/database/options/spatial

Examples, white papers, downloads, discussion forum, sample data ....
Demonstration