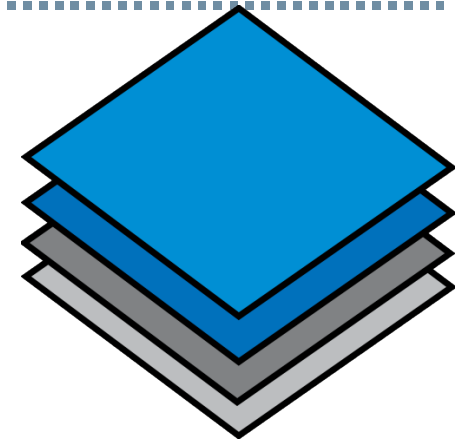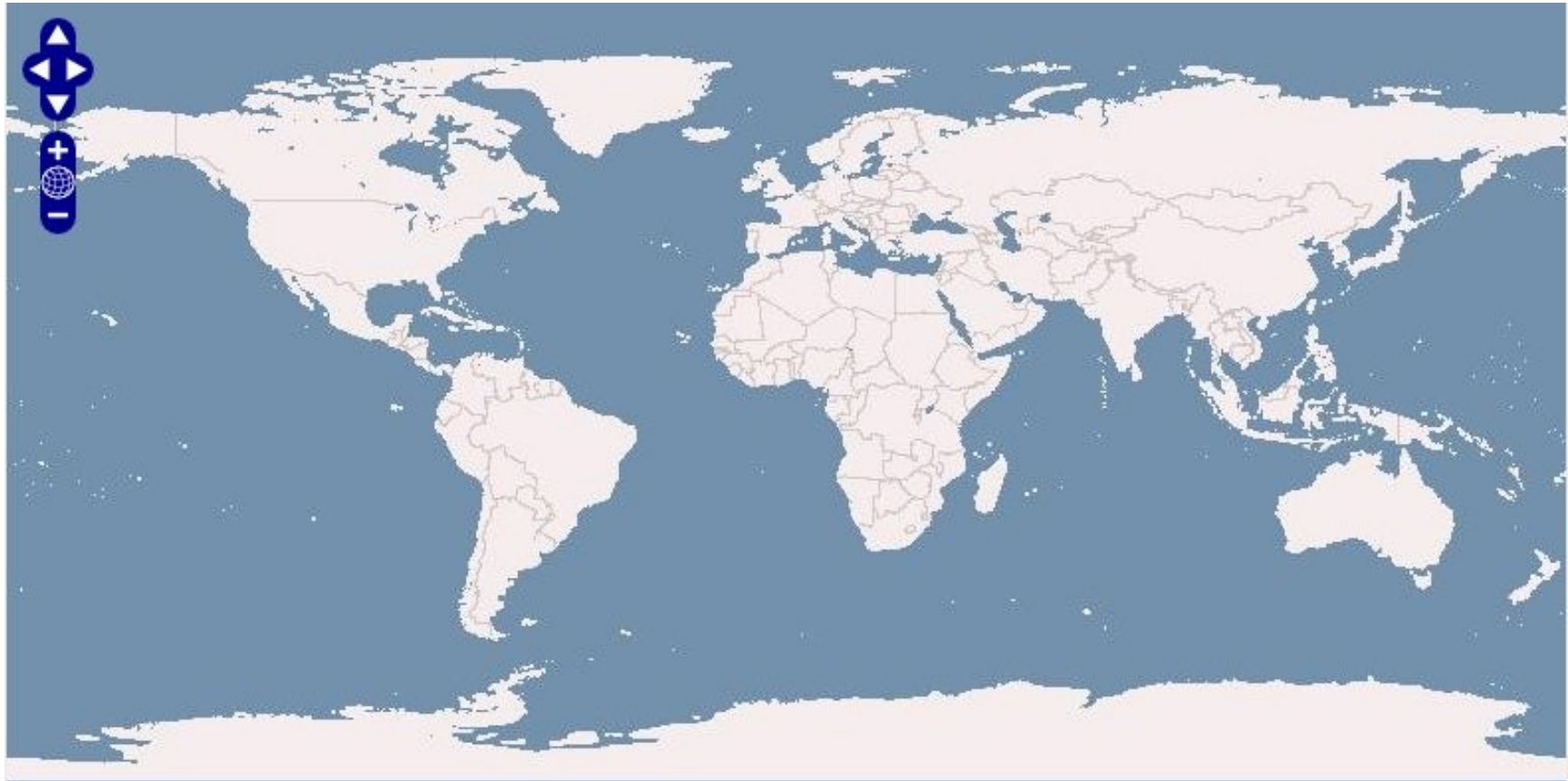# OpenLayers

Qu'est-ce que OpenLayers ?

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- Une API pour développer des applications carto

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- Pur Javascript

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- Supporte les standards ouverts

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- Une API pour développer des applications carto
- Pur Javascript
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- Supporte les standards ouverts
- Supporte aussi les standards propriétaires
- Licence BSD

Démo rapide

- Tiling
- Navigation Zoom in / out
- Panning fluide
- (Zoom box)

Historique

- Projet relativement récent

Historique

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- Premiers dev en 2005

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- Branche vecteur
- Release 2.4

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OSGEO

- OSGeo Projects – Web Mapping
- Projet en incubation

Fonctionnalités: Layers

- OGC WMS
- OGC WFS
- OGC TMS
- OGC GML
- GeoRSS
- Ka-Map
- Image

- Google Maps
- MSN Virtual Earth
- Yahoo! Maps
- Multimap
- WorlWind

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Fonctionnalités: Contrôles

- Zoom / Pan
- Zoom Bar
- Mouse controls
- Layer Switcher (aka "légende")
- Coordonnées souris
- Permalink

Fonctionnalités: autres ...

- Markers
- Popups
- Objets métiers
- Gestionnaire d'évènements
- ... and, bien sûr ...

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Fonctionnalités: autres ...

- Markers
- Popups
- Objets métiers
- Gestionnaire d'évènements
- "AJAX"

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OenLayers: WMS

```html
<html>
<head>
<script src="http://openlayers.org/api/2/OpenLayers.js"></script>
</head>
<body>
  <div style="width:100%; height:100%" id="map"></div>
  <script defer="defer" type="text/javascript">
    var map = new OpenLayers.Map('map');
    var wms = new OpenLayers.Layer.WMS("OpenLayers WMS",
        "http://labs.metacarta.com/wms/vmap0", {layers: 'basic'});
    map.addLayer(wms);
    map.zoomToMaxExtent();
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    map.addLayer(wms);
    map.zoomToMaxExtent();
  </script>
</body>
</html>
```

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OenLayers: WMS

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OenLayers: Google Maps

```html
<html>
<head>
<!-- this gmaps key generated for http://openlayers.org/dev/ -->
<script
  src='http://maps.google.com/maps?file=api&amp;v=2&amp;key=A[...]PdGD
  wqpQ'></script>
<script src="http://openlayers.org/api/2/OpenLayers.js"></script>
</head>
<body>
  <div style="width:100%; height:100%" id="map"></div>
  <script defer="defer" type="text/javascript">
    var map = new OpenLayers.Map('map');
    var layer = new OpenLayers.Layer.Google("Google");
    map.addLayer(layer);
    map.zoomToMaxExtent();
  </script>
</body>
</html>
```
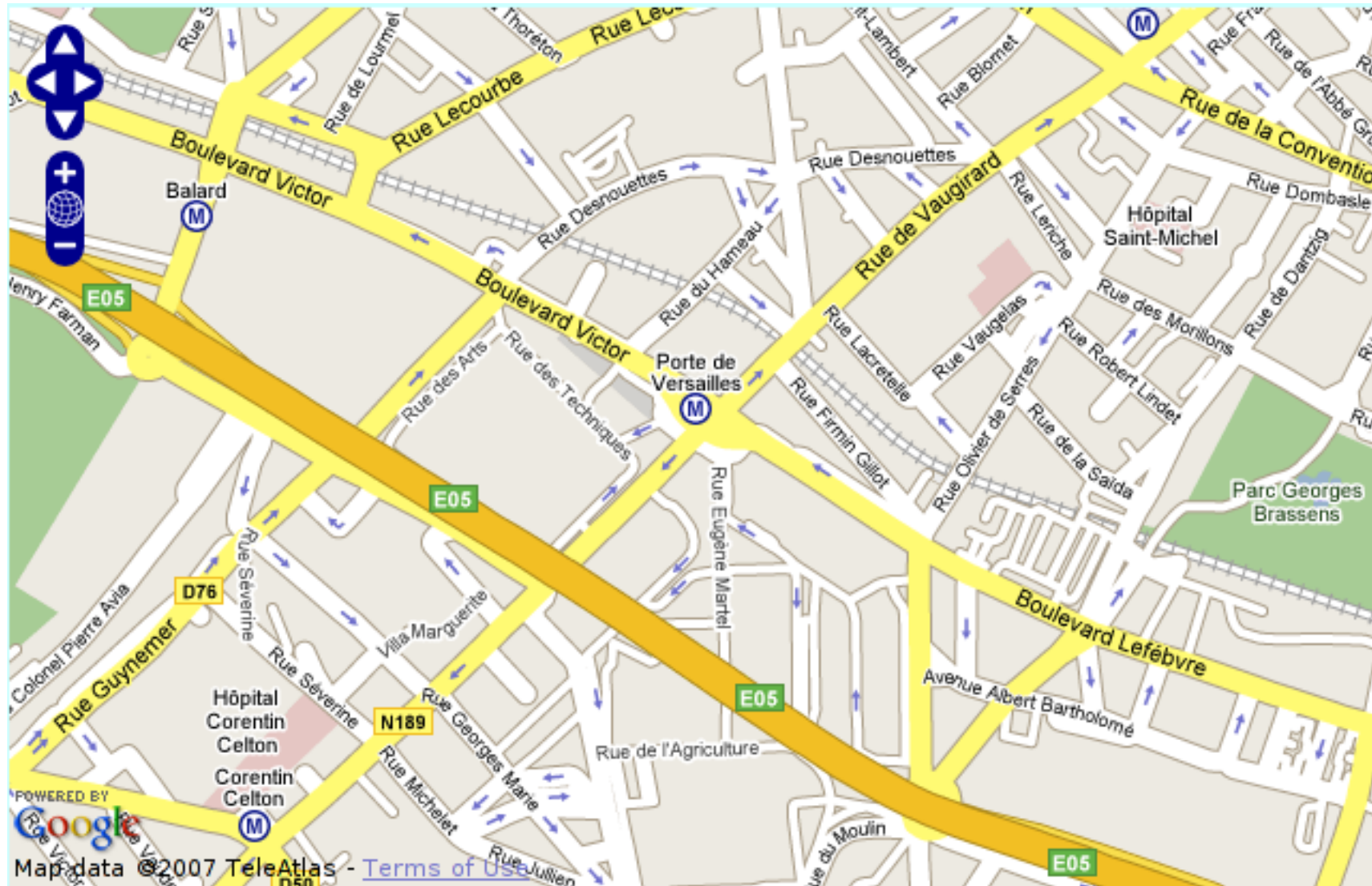
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OenLayers: Google Maps

```html
<html>
<head>
<!-- this gmaps key generated for http://openlayers.org/dev/ -->
<script
  src='http://maps.google.com/maps?file=api&amp;v=2&amp;key=A[...]PdGD
  wqpQ'></script>
<script src="http://openlayers.org/api/2/OpenLayers.js"></script>
</head>
<body>
  <div style="width:100%; height:100%" id="map"></div>
  <script defer="defer" type="text/javascript">
    var map = new OpenLayers.Map('map');
    var layer = new OpenLayers.Layer.Google("Google");
    map.addLayer(layer);
    map.zoomToMaxExtent();
  </script>
</body>
</html>
```

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OenLayers: Google Maps

OpenLayers: Autres couches supportées

- MSN Virtual Earth

OpenLayers: Autres couches supportées

- MSN Virtual Earth
- Yahoo! Maps

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OpenLayers: Autres couches supportées

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OpenLayers: Autres couches supportées

- MSN Virtual Earth
- Yahoo! Maps
- MultiMap

OpenLayers: Autres couches supportées

- MSN Virtual Earth
- Yahoo! Maps
- MultiMap
- (ajoutez la votre) ...

OpenLayers: Exemple Géosignal

```
[...]
<body>
<div id="map"></div>
<script type="text/javascript">
  var options = {
    projection: "EPSG:27582",
    units: 'm',
    maxExtent: new OpenLayers.Bounds(5638, 1620431, 1197822, 2677441),
    maxResolution: 400
  };
  var map = new OpenLayers.Map('map', options);
  var raster1000k = new OpenLayers.Layer.WMS( "RASTER1000k",
        "http://www.geosignal.org/cgi-bin/wmsmap", {layers:
  'RASTER1000k'});
  map.addLayer(raster1000k);
  map.zoomToMaxExtent();
</script>
</body>
</html>
```

OpenLayers: Exemple Géosignal

```html
[...]
<body>
<div id="map"></div>
<script type="text/javascript">
  var options = {
    projection: "EPSG:27582",
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    maxExtent: new OpenLayers.Bounds(5638, 1620431, 1197822, 2677441),
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  var map = new OpenLayers.Map('map', options);
  var raster1000k = new OpenLayers.Layer.WMS( "RASTER1000k",
        "http://www.geosignal.org/cgi-bin/wmsmap", {layers:
  'RASTER1000k'});
  map.addLayer(raster1000k);
  map.zoomToMaxExtent();
</script>
</body>
</html>
```

OpenLayers: Exemple Géosignal

OpenLayers: WMS transparent

```
<script type="text/javascript">
  var options = {
    projection: "EPSG:27582",
    units: 'm',
    maxExtent: new OpenLayers.Bounds(5638, 1620431, 1197822, 2677441),
    maxResolution: 20000
  };
  var map = new OpenLayers.Map('map', options);
  var raster1000k = new OpenLayers.Layer.WMS( "RASTER1000k",
          "http://www.geosignal.org/cgi-bin/wmsmap", {layers:
  'RASTER1000k'});
  var overlay = new OpenLayers.Layer.WMS( "Departements",
      "http://www.geosignal.org/cgi-bin/wmsmap",
      {transparent:'true', layers: 'Departements', 'format':'png'} );
  map.addLayers([raster1000k, overlay]);
  map.addControl(new OpenLayers.Control.LayerSwitcher());
  map.zoomToMaxExtent();
</script>
```

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OpenLayers: WMS transparent

```
<script type="text/javascript">
  var options = {
    projection: "EPSG:27582",
    units: 'm',
    maxExtent: new OpenLayers.Bounds(5638, 1620431, 1197822, 2677441),
    maxResolution: 20000
  };
  var map = new OpenLayers.Map('map', options);
  var raster1000k = new OpenLayers.Layer.WMS( "RASTER1000k",
          "http://www.geosignal.org/cgi-bin/wmsmap", {layers:
  'RASTER1000k'});
  var overlay = new OpenLayers.Layer.WMS( "Departements",
      "http://www.geosignal.org/cgi-bin/wmsmap",
      {transparent:'true', layers: 'Departements', 'format':'png'} );
  map.addLayers([raster1000k, overlay]);
  map.addControl(new OpenLayers.Control.LayerSwitcher());
  map.zoomToMaxExtent();
</script>
```

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OpenLayers: WMS transparent

```html
<script type="text/javascript">
  var options = {
    projection: "EPSG:27582",
    units: 'm',
    maxExtent: new OpenLayers.Bounds(5638, 1620431, 1197822, 2677441),
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  var map = new OpenLayers.Map('map', options);
  var raster1000k = new OpenLayers.Layer.WMS( "RASTER1000k",
          "http://www.geosignal.org/cgi-bin/wmsmap", {layers:
  'RASTER1000k'});
  var overlay = new OpenLayers.Layer.WMS( "Departements",
      "http://www.geosignal.org/cgi-bin/wmsmap",
      {transparent:'true', layers: 'Departements', 'format':'png'} );
  map.addLayers([raster1000k, overlay]);
  map.addControl(new OpenLayers.Control.LayerSwitcher());
  map.zoomToMaxExtent();
</script>
```

OpenLayers: WMS transparent

OpenLayers: GeoRSS

```
OpenLayers.ProxyHost="/cgi-bin/proxy.cgi?url=";

var map = new OpenLayers.Map('map');
var wms = new OpenLayers.Layer.WMS( "OpenLayers WMS",
 "http://labs.metacarta.com/wms/vmap0", {layers: 'basic'} );

var georss = new OpenLayers.Layer.GeoRSS( "GeoRSS",
 "http://earthquake.usgs.gov/recenteqsww/eqs7day-M2.5.xml" );

map.addLayers([wms,georss]);

map.zoomToMaxExtent();
```

OpenLayers: GeoRSS

M 3.5, Virgin Islands region
September 07, 2006 22:09:59 GMT

OpenLayers: Markers

```
var map = new OpenLayers.Map('map');

var markers = new OpenLayers.Layer.Markers("Markers");
map.addLayer(markers);


var point  = new OpenLayers.LonLat(5, 40)
var marker = new OpenLayers.Marker(point);
markers.addMarker(marker);


map.zoomToMaxExtent();
```

OpenLayers: Markers

```
var map = new OpenLayers.Map('map');

var markers = new OpenLayers.Layer.Markers("Markers");
map.addLayer(markers);

var point  = new OpenLayers.LonLat(5, 40)
var marker = new OpenLayers.Marker(point);
markers.addMarker(marker);

map.zoomToMaxExtent();
```

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OpenLayers: Markers

```
var markers = new OpenLayers.Layer.Markers("Markers");
map.addLayer(markers);

popup = new OpenLayers.Popup.Anchored("Example",
                         new OpenLayers.LonLat(5,40),
                         new OpenLayers.Size(200,75),
                         "Welcome to Barcelona");
popup.setBackgroundColor("yellow");
popup.setOpacity(0.8);
popup.hide();
map.addPopup(popup);


var point  = new OpenLayers.LonLat(5, 40)
var marker = new OpenLayers.Marker(point);
markers.addMarker(marker);


marker.events.register( "click", marker,

                                            function (e)
{ popup.toggle() } );
```

```
var markers = new OpenLayers.Layer.Markers("Markers");
map.addLayer(markers);

popup = new OpenLayers.Popup.Anchored("Example",
                          new OpenLayers.LonLat(5,40),
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marker.events.register( "click", marker,
                                      function (e)
{ popup.toggle() } );
```
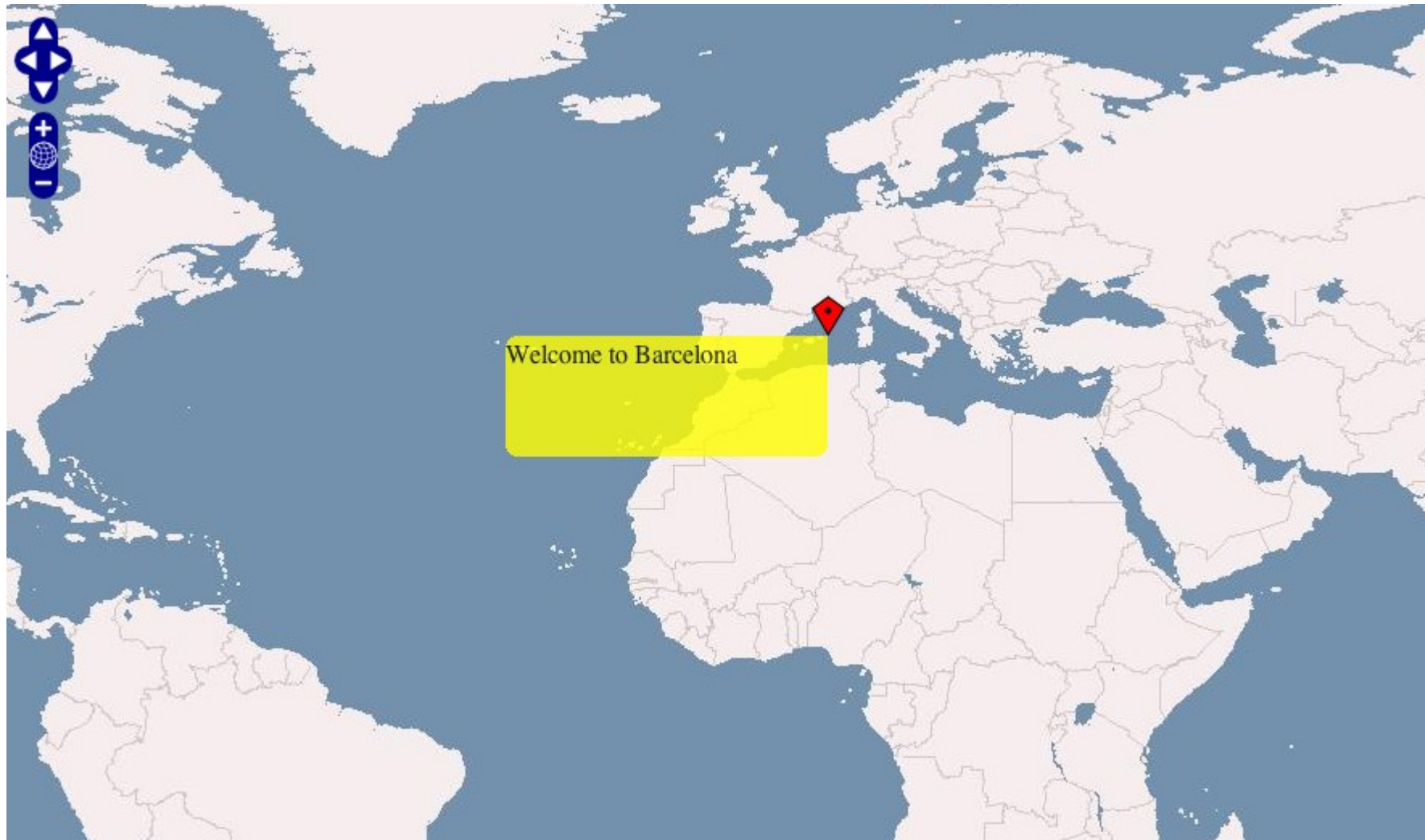
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OpenLayers: Popups

Welcome to Barcelona

OpenLayers: Controls

```
var controls = [
   new OpenLayers.Control.PanZoomBar(),
   new OpenLayers.Control.MouseToolbar(),
   new OpenLayers.Control.Permalink(),
   new OpenLayers.Control.MousePosition(),
   new OpenLayers.Control.OverviewMap()
];

var map = new OpenLayers.Map('map', { controls: controls});
```

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OpenLayers: Controls

OpenLayers: Nouveautés

- Vector

OpenLayers: Nouveautés

- Vector
- WFS

OpenLayers: Nouveautés

- Vector
- WFS
- Dessin

OpenLayers: Nouveautés

- Vector
- WFS
- Dessin
- WFS-T

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OpenLayers: Nouveautés

- Vector
- WFS
- Dessin
- WFS-T
- KML

OpenLayers: Nouveautés

- Vector
- WFS
- Dessin
- WFS-T
- KML
- Edition

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Vos contacts

Camptocamp SA

PSE A – Parc Scientifique EPFL

CH-1015 Lausanne

www.camptocamp.com / www.cartoweb.org

Nom Prénom

Fonction (facultatif)

Tél :   ++....

Mobile : ++...

E-mail : ???@camptocamp.com

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