HERE Maps API - Zooming to all Markers

This article shows how to show a map and zoom to several markers with HERE Maps.

Introduction

An important case that necessitates zooming to all markers is when you have more than one Marker on the map and in a container, then would like to display all of the Markers for that container visible on the screen at the same time. To achieve this, you would need to know what the correct zoom level is such that all the Markers become visible.

Prerequisites

HERE Maps API supported web browser (basically any modern web browser)

The example assumes you have already added the HERE Maps to your web page as explained in the previous article HERE Maps API - Add Maps To Any Web Page

Important note about maps credentials

Nokia provides several services options within the Maps API offering. The service is free to use, but you must obtain and use authentication and authorization credentials to use the services. Please read the Terms and Conditions and check the Pricing Plans page to decide which business model best fits your needs. Authentication requires unique Maps API credentials, namely an AppId and a token. You can get these credentials free for free following the instructions here

Implementation

We will need the concept of `BoundingBox` when we define the area that will later cover the map markers. Here is the definition of it:

What is a Bounding box?

A bounding box defines a rectangular area in a geographic coordinate system. As the bounding box is specified by its top-left and bottom-right corner, the box is not necessarily the smallest rectangle spanned by these two points; it is possible to define bounding boxes that are wider than 180° or higher than 90° (i.e., by setting the longitude of top-left corner to a bigger value than the longitude of the bottom-right corner). Bounding box class is immutable.

Creating the map Markers

Let's first create three map Markers. Each marker will have a `Geocoordinate` of its own, and each is by default a `StandardMarker`.

```
myMarkerOne  = new nokia.maps.map.Marker([22.1,10.1]);
myMarkerTwo  = new nokia.maps.map.Marker([53.1,63.1]);
myMarkerThree = new nokia.maps.map.Marker([22.1,13.1]);
```

Creating the map Container and add the Markers into it

To carry the map `Marker`s, we will also need to define a new `Container`. We will use the `add()` method to put each of the marker objects inside the `Container`:

```
var myContainer = new nokia.maps.map.Container()

myContainer.objects.add(myMarkerOne);
myContainer.objects.add(myMarkerTwo);
myContainer.objects.add(myMarkerThree);

map.objects.add(myContainer)
```

Zooming to the Bounding box covering all Markers in the Container:

Finally we will set the map `ZoomLevel` to cover all the `Marker` coordinates. This is achieved by calling the `zoomTo()` method on the map, to which we will give as parameter the object that will be received by calling the `getBoundingBox()` method on `myContainer`.

(C) Copyright Nokia 2014. All rights reserved.

```
    map.zoomTo(myContainer.getBoundingBox(),false,true);
```

After this defined `BoundingBox` is available to be used by the `zoomTo()` function, which will zoom the map to the given bounding box. If the `keepCenter` flag (default is `false`) is used, the size of the viewport will be increased such that the original center is still located in the center of the viewport.

Note: This operation may use a platform specific animation if this is indicated by the corresponding optional animation string.

Example code

This example zooms out to fit all markers onto the map.

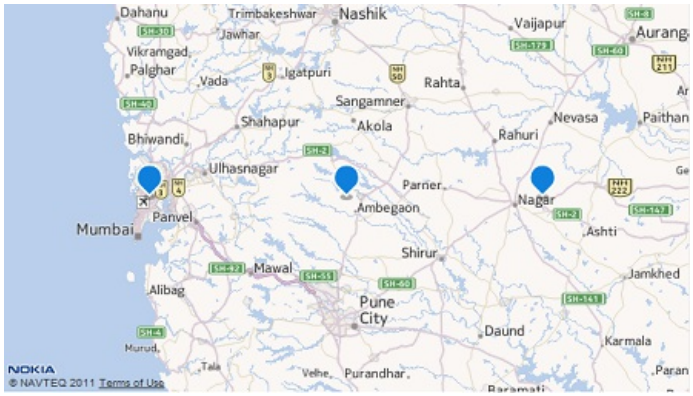
```
function addMarkersAndZoomTo(map){
 markerOne  = new nokia.maps.map.Marker([19.119, 72.8957]);
 markerTwo  = new nokia.maps.map.Marker([19.119, 73.8957]);
 markerThree = new nokia.maps.map.Marker([19.119, 74.8957]);

 var container = new nokia.maps.map.Container()

 container.objects.add(markerOne);
 container.objects.add(markerTwo);
 container.objects.add(markerThree);

 map.objects.add(container)

 map.zoomTo(container.getBoundingBox());
}
```



The code behind the working example may be found here:

http://rawgithub.com/heremaps/examples/master/maps_api_for_javascript/simple-examples/zoom-to-all-markers.html

For more on the HERE Maps API

Please check out the HERE Maps API full documentation and API reference here:

- HERE Maps API

You may also access the interactive API explorer

- API explorer

(C) Copyright Nokia 2014. All rights reserved.

(C) Copyright Nokia 2014. All rights reserved.