# ISM-1.56: iShare Maps for Administrators

***An Astun Technology iShare Training Module***

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| **Code** | ISM-1.56 |
| **Title** | iShare Maps for Administrators |
| **Description** | Topics specific to iShare Maps, including My House, My Nearest. |
| **Required Software** | iShare Maps 5.6.0 |
| **Target Audience** | iShare Administrators |
| **Pre-requisites** | iShare for Administrators |
| **Duration** | 2 hours |
| **Version** | 1.0 |
| **Updated** | 19 Sep 2017 |
| **Updated by** | Jo Cook |
| **Status** | Complete |

## 1. The iShare Maps Front End

This section will demonstrate what the user can see and do with the standard client interface for iShare Maps. The URL for this in the standard Astun training instance is http://localhost/iShareLIVE.Web/atMyCouncil.aspx. A bookmark has placed in the bookmarks toolbar in Firefox.

Before we look at configuration, we will run through the iShare Maps user interface to give you an idea of what is available to end users.

### 1.1. My Maps

My Maps provides access to all the spatial layers defined in the Map Sources. This includes the ability to:

- **search** against map layers,
- conduct radial searches against a layer and a known location (**Find Nearest**)

- **turn layers** on and off
- **query** features by clicking on the map
- **jump** to defined map views (useful for popular locations or big events)

## Searching against a Layer

Several layers have been configured for searches in the demo instance - configuration usually makes use of a street address or the name of a facility such as school name. For example we can search on the site in:

- Parishes and Wards (use 'west end')
- Schools (use 'hill')
- Airports (use 'heathrow')
- Railway Stations (use 'guildford')

## Find Nearest

A user can provide a location, which is then displayed as the current address, and from this point they can make use of the **Find Nearest** functionality. This will return a list of the nearest features from a specified layer. The user can restrict results by maximum search distance, and by the number of results.

We can see Find Nearest in action using an address (such as 'GU18 5QR') and the following layers:

- Primary schools (use a small radius)
- Secondary schools (use a wider radius)
- Cycle Networks (use the maximum radius)

Note that Cycle Networks is a line geometry layer - Find Nearest operations work against polygons and lines as well as point-based layers.

## Layer visibility

Users can control which layers are displayed on the map by selecting a layer using its associated checkbox. Note that we can configure whether a layer is visible at start up, whether it is on all the time and whether a user can make info click requests against it.

To demonstrate this, we will:

- Switch / off any layer
- Look at the Council and Democracy layer group - the Area of Interest layer is always on

## Query features

Users are able to click on the map and retrieve information about the layers that are present in that location. In iShare Maps, an administrator can configure which layers information is returned for, which fields from each layer are returned, and how the information is presented to the user.

## 'Take Me To' locations

An iShare administrator can create a series of bookmarks for a map. This enables the user to jump to a particular location with a given set of layers switched on. This is useful for occasions such as sporting events, where information such as car parking and toilet locations are required.

## 1.2. My House

My House uses the same spatial data as is used in My Maps, but in a form that is more relevant for an individual resident. Most of the data is location-based and relies on the address provided by the user to extract and filter the information.

Note: to view My House information a location is required - use 'GU18 5QR' as a postcode for this workshop.

We will look at some examples of My House functionality in action.

**Polygon**: The county councillors information is based on the ward data. This is a polygon dataset, and iShare returns the information that relates to the resident's location. This is a **point in polygon** operation.

**Nearest**: The Transport information uses point locations, and iShare returns the nearest railway station to the resident's location. This is a **find my nearest** (or distance) operation.

**Data Share**: The council tax band information is stored without geometry, while the tax bands relate to UPRNs (Unique Property Reference Number) in a table. iShare looks up the tax band based upon the UPRN of the resident's location.

**Mini Map**: The Property Mini-Map and the Aerial Overview Mini-Map both make use of location parameters exposed by iShare, in this case Easting and Northing coordinates, passing them to MapServer as part of image requests.

**Location Free**: The BBC News feed is non-spatial and has no location identifier. iShare takes this feed and re-publishes it - in this case by limiting it to the latest five items.

Using the side panel, users can control the information which is presented to them. This selection is stored by the browser as a cookie, so the next time the user visits the site they are only presented with the information they have previously selected.

### 1.3. My Nearest

My Nearest provides information on the nearest facilities to a resident's location. Categories can be expanded and collapsed.

For example, the **Education and Learning** category shows the nearest schools to a resident's location, and if the school website is included in the data, a link is created using the school name. The distance to each school is displayed, as well as a link to My Maps. Distance has been limited to 1.5 km for Primary Schools, while other school types have a maximum distance of 5 km.

Note that My House and My Nearest use different map sources - they can hold different groups of information and be independently configured, even though they may use the same underlying data sources.

## 2. iShare Maps Tasks

### 2.1. My House Examples

#### Point-in-Polygon

We'll have a look at a point in polygon layer in Studio.

1. Open iShare Studio if it's not already open.
2. View the County Councillors Layer in Studio by selecting Map Sources > MyHouse > My House > Elected Members > Your County Councillor. Note that the Layer definition in the myhouse.map file is 'county_councillors'.
3. Open the myhouse.map file in Studio by selecting Map Sources > MyHouse > My House and clicking the **Map Editor** tab.
4. Find the Layer definition for the 'county_councillors' layer. Note that the data is the **moderngov.spati**

**al** table in the local PostgreSQL iShareDataAstun database.
5. Open QGIS, and connect to the moderngov.spatial table, using the iShareDataAstun connection.
6. Use the info tool to look at the HTML content in the **full_html** attribute.

Note that:

1. MapServer will automatically alter HTML held in information requests when the user clicks on the map feature, meaning that it can't be used in a web page. To stop this, we use the '_raw' suffix in the data definition in the myhouse.map file.
2. In Studio, the 'full_html_raw' and the ward name are selected to be visible for My House.
3. Under 'Search and Show My' options the 'Show My' option is selected. This means that iShare will determine which ward polygon the user's location falls in, and will generate the HTML accordingly.

### Data Share

The next layer uses a data share connection.

1. Examine the Council Tax Layer under the Property Details Layer Group.The data comes from a Data Share Connection called 'council_tax'.
2. The data is indexed by UPRN, which is known to iShare from the user's location.
3. The Data Share is identified in the layer definition as a Property-based lookup datasource.
4. Data Share Connections are added to the Map Source by selecting **Lookup Settings** under Map Sources > MyHouse > My House.

### MiniMap

The MiniMap shows a small version of one of the base maps, with parameters to determine size, zoom etc.

1. Select the Mini Map virtual layer under Map Sources > MyHouse > My House > Property Details.
2. Open the Row Settings for the row by double clicking on it.
3. The row settings makes use of the user's location (easting and northing) to generate a MiniMap and the URPN is also displayed (referenced as the uid).

The code for the row is shown below.

```
<dl><dd id="MiniMap"><img
src="MapGetImage.aspx?RequestType=Map&amp;MapWidth=200&amp;MapHeight=200&am
p;MapSource=Workshop/base_ADS_OSOpen&amp;Easting=##easting##&amp;
Northing=##northing##&amp;Zoom=220&amp;mapid=-1&amp;ServiceAction=GotoLocat
ion&amp;ZoomPin=1" alt="##name##" />
<br /><strong>Unique Property Ref (UPRN)</strong><br />##uid##, E:
##easting##m, N: ##northing##m</dd></dl>
```

### Location Free

We'll look at a layer using a non-spatial data source.

1. In Studio, look at the **BBC Surrey News RSS** Data Share connection in the **RSS Feeds** group, and note that the feed is limited to 5 records.
2. Look at the **BBC News** layer under the **Feeds** layer group.
3. Note that the lookup data source is row-based and references the BBC Surrey News RSS data share.
4. The **Row Settings** field holds the HTML for each row in the Data Share. Double hashtags define the field names in the Data Share definition.

## 2.2. My Nearest Example

My Nearest works in much the same way as My House, with the content focussed on nearest amenities to the user's location. The information returned is displayed in expandable panels.

In the web application, go to the **My Nearest** tab.

- Notice the use of images in the **Education and Learning** layers.
- Notice the wider search distance for Secondary Schools.

The transportation datasets are point locations, and so these can be used in 'find my nearest' (or distance) operations.

Create a point layer which uses a distance operation to display results.

1. Identify the **Transport** layer group under Map Sources > MyHouse > My Nearest.
2. The data for the Train stations comes from the transport schema in the iShareData Astun database.
3. Add a new Classic Layer called **Heliports** in this Layer Group that makes use of the 'transport_heliport' layer definition in the myhouse.map file.
4. Select **Find Nearest** and choose a very large search distance and a maximum number of results to be listed.
5. Select **name** as a field to display and turn off the display field name option.
6. Save your changes.
7. Run iShare Maps in a browser: http://localhost/iShareLIVE.Web/atMyResponsiveCouncil.aspx.
8. Use the **My House** tab and enter 'GU18 5QR' as the location.
9. Observe the Heliport information in the **My Nearest** tab.

# 3. Embedded Maps

## 3.1. The Lite Map

The Lite Map is a simple interactive map that can be constructed with a few parameters. The user can pan, zoom and click on map features for further information. The web designer can create a Lite Map in a matter of minutes using a few lines of JavaScript.

- Demonstrate the MapSource naming convention

Note: the Lite Map parameters include a MapSource: this is the relative path and file name of the XML file that defines our Map Source. For this workshop, the Map Source is **mapsources/Default**. This is because our Workshop Map MapSource definition is held by the D:\Astun\iShare\LIVE\WebApps\WebService\config\mapsources\Default.xml.

Exercise: Create a Lite Map for Primary Schools

1. Copy D:\Astun\iShare\LIVE\WebApps\Web\examples\litemap\atLiteMap.html as primary_schools_map.html.
2. Open D:\Astun\iShare\LIVE\WebApps\Web\examples\litemap\primary_schools_map.html in a text editor.
3. Check that the mapSource is 'mapsources/Default' and the layers variable is 'Primary_Schools_OGC'.
4. Save.
5. Run http://localhost/iShareLIVE.Web/examples/litemap/primary_schools_map.html
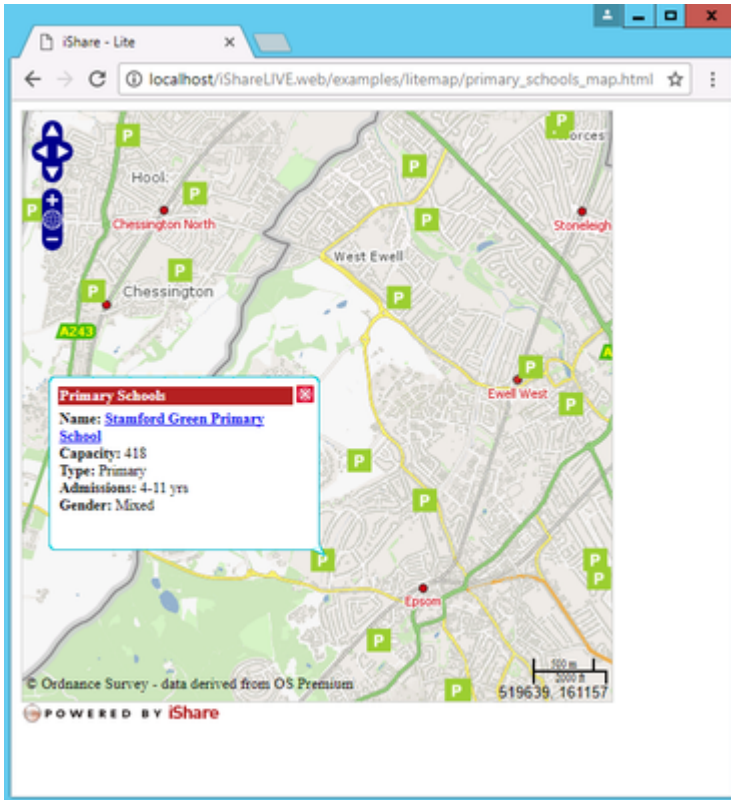
## 3.2. The Solo Map

The Solo Map provides the same panel as in iShare MyMaps. This time the web designer is able to control which panel features appear.

- Demonstrate the Solo Map
    - Run http://localhost/ishareLIVE.Web/examples/solomap/atSoloMap.html in a browser.
    - Explain Solo Map takes the same optional parameters as the Lite Map plus the options to rename / remove panels.

## 3.3. LocalInfo Data Requests

The LocalInfo Data Request controls allow users to request information directly from iShare in order that it may be displayed in context on their website. You can choose to stream JSON or JSONP [as well as the old RSS].

Exercise: Investigate LocalInfo requests & responses

1. The first step is to configure Studio for LocalInfo Requests. Open Studio and click on the Settings icon. On the General Settings tab scroll down until you can see the Web section. There are two entries that require attention.
    a. MapPage = the URL for your iShareMaps.
    b. MapSource = the MapSource that you wish to  use.
    c. Now scroll down a little further to the WebService section. Here there is just one entry requiring attention.
    RSSXL = set to atLocalInfoJSON.xsl to stream JSON.

Now the LocalInfo Settings have been configured you are ready to browse to the sample page.

1. Run http://localhost/ishareLIVE.Web/examples/localinfo/localinfo.html in a Firefox browser. Click on Firebug in a separate window.
2. In the address search box leave the easting,northing as 518000,161000.

3. Choose **Default** as the MapSource, select **Council and Democracy** as the Layer Group, and **Councils** as the Layer.
4. The URL below shows the example form of localinfo request, constructed from the parameters chosen.
5. The boxes below show the results in both json and html format.
6. The html-formatted results include a link out to an iframe showing a Lite Map.