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Map Intelligence Client

User Manual for Dashboard Client

INTRODUCTION

HOW THIS MANUAL IS ORGANIZED

The Map Intelligence Dashboard Client User Manual has been written for the End User and contains the following Sections:

- **Introduction and Concepts** – Introduces key Map Intelligence concepts and introduces the different user groups involved.

- **Configuration Overview –** Describes prerequisites and outlines the configuration tasks of the Client Administrator and the Layer Designer.

- **Administrator Configuration –** Describes the Client Administrator's configuration tasks

- **Dashboard Configuration –** Describes the steps required in adding the Map Intelligence component to an existing Hyperion Intelligence Dashboard Builder dashboard.

- **Map Intelligence Configuration –** Describes how to configure the settings for your Map Intelligence Server and the properties of the underlying map to be used for your analysis.

- **Layer Configuration** - Describes how to configure the Map Intelligence Layer configuration screens.

- **Advanced Topics –** Describes how to configure Map Intelligence for Auto-Pilot Mode.

This manual also includes a Glossary and Index sections which can be found at the end of the manual.

HYPERION PRODUCTS

This manual uses the following names to describe Hyperion products.

Hyperion Intelligence Designer *means* Hyperion Intelligence Designer or Hyperion System 9 BI+ Interactive Reporting Studio.

Hyperion Intelligence Dashboard Builder *means* Hyperion Intelligence Dashboard Builder or Hyperion System 9 BI+ Dashboard Studio.

Hyperion iServer *means* Hyperion Performance Suite iServer, System 9 BI+ Workspace.

TYPES OF USER

The effective use of Map Intelligence involves a number of separate processes which can be performed by different types of user. The following section describes these users and the Map Intelligence manuals and guides available. This manual has been written for Client Administrators and Layer Designers.

SERVER ADMINISTRATORS

Server Administrators are responsible for the installation and management of the Map Intelligence Server. These users should be familiar with the organization's mapping server (hereinafter referred to as GIS Provider). Server Administrators are advised to read the separate Server Installation and Administration Guide found on the Map Intelligence Server CD.

CLIENT ADMINISTRATOR

Client Administrators are responsible for configuring the Map Intelligence component before it can be used to configure analysis layers. This group is involved in merging the Map Intelligence component into Hyperion® Intelligence Dashboard Builder templates and dashboards, as well as providing a way to access the Mapping Viewer from the dashboards. Client Administrators are also responsible for determining which maps, colors and icons are available for the configuration of analysis layers. These are available on the Map Intelligence Server. This manual should be read by Dashboard Client Layer Designers.

LAYER DESIGNERS

Layer Designers are responsible for configuring the Map Intelligence layers to be displayed in the Mapping Viewer. This type of user should have a firm understanding of the spatial analysis required.

Layer Designers using the Dashboard Client are most likely responsible for creating the dashboards that present key information and metrics. The dashboards then become the basis for spatial analysis. The designers are normally Business Analysts who are familiar with the data available in the organization. The process for creating a dashboard is documented in the Hyperion Intelligence Dashboard Builder manual. This manual should be read by Dashboard Client Layer Designers.

END USERS

End Users are users who want to view configured Map Intelligence layers on a map. Their roles may include slicing and dicing data on the dashboard, launching the Mapping Viewer to generate spatial representations of the data and using the Map Intelligence tools and features to analyze the map. End Users should Read the Map Intelligence Mapping Viewer Manual found on the Map Intelligence Server CD.

WHAT IS MAP INTELLIGENCE?

Map Intelligence creates interactive mapping applications in real time based on information sent from business dashboards. It tracks the current state of charts, pivots and data result-sets and keeps the mapping display and the dashboard synchronized. Any data manipulation such as limits, filtering or chart slicing that are applied in the dashboard are automatically reflected in the mapping application. Even the dashboard look and feel are automatically transferred to the map display.

Spatial data can be selected from the map display and returned to the dashboard as limits to give a sharper focus to your analysis. This round trip cycle can be repeated as often as required. Your spatial and non-spatial analysis is a seamless cycle where your state of analysis in either representation is maintained in the other.

WHAT IS A LAYER?

Maps are built with layers. Each layer holds characteristics that may be of interest to End Users. Layers contain features of the map such as streets, parks, postal districts, cities, radio towers, rivers and so on. Each map layer sits on top of another layer, e.g. a country layer may sit all the way at the bottom with street layers sitting right at the top.

Layers can also be created dynamically from data found in external sources. Map Intelligence is capable of generating a variety of layer types to aid analysis.

In this manual, layers that reside as part of the mapping environment are referred to as **built-in layers**. Layers created dynamically from external data sources including your dashboard data are known as **Map Intelligence layers.**

LAYER TYPES

The following layers can be created and configured using Map Intelligence:

POINT LAYERS

Point layers are map layers where data is represented on the map as discrete point images or symbols. For example: a particular layer might represent the location of stores as push-pin icons and another layer could represent accidents as colored dots, where the color (theme) represents the severity of the accident. Typically, the rows in a table of data belong to a business concept such as people or address details, where each column is an attribute of that concept. Thus each row in your business data can be represented as an individual point in a point layer. In Map Intelligence, point layers form the foundation for relationship layers.
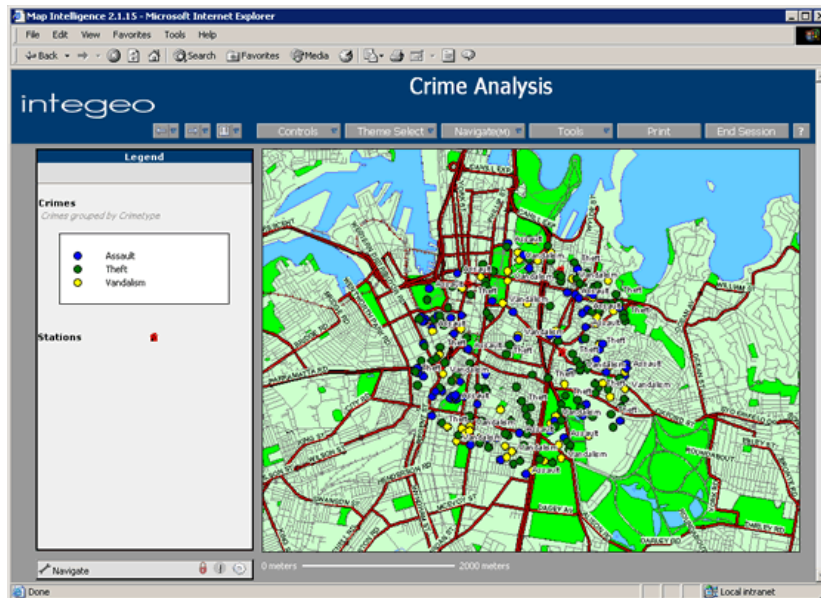
Fig 1. The Mapping Viewer displaying a Point layer.

RELATIONSHIP LAYERS

Radius relationship layers are circular regions with themes around certain points of interest that show information about other points which fall within that circular region. These layers are generated by Map Intelligence. They are based on calculations made by Map Intelligence on the specified data values as defined by the layer designer. For example: different colored circles indicate the average house price within half a kilometer of a proposed waste plant. Another example is where different colored circles indicate the number of burglaries that have occurred within a five-mile distance of houses belonging to known burglars. In the current version of Map Intelligence, the circle center points (eg: houses belonging to known burglars) and the data being analyzed (burglaries), must be point layers.
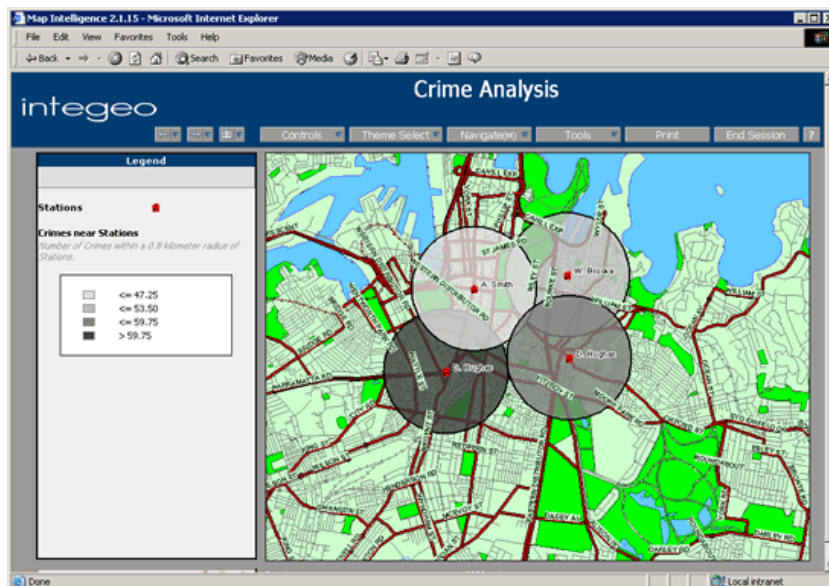
Fig 2. The Mapping Viewer displaying a Radius Relationship layer.

A **Region Relationship layer** corresponds to a map area of any shape that is solely geographical in its definition, and is not generated by Map Intelligence. Examples would be suburbs, zip / postal codes, local government areas, or police precincts. **Region Relationship layers** can be given themes according to specified data rules associated with the points that fall within that region. An example of such a theme could be color-coding precincts according to the number of crimes that have taken place within their boundaries, or applying different hatches to suburbs based on the total value of house sales that have occurred in each one. Map Intelligence works out in which region a point (eg: a sale or an accident) physically belongs to by doing a spatial calculation.
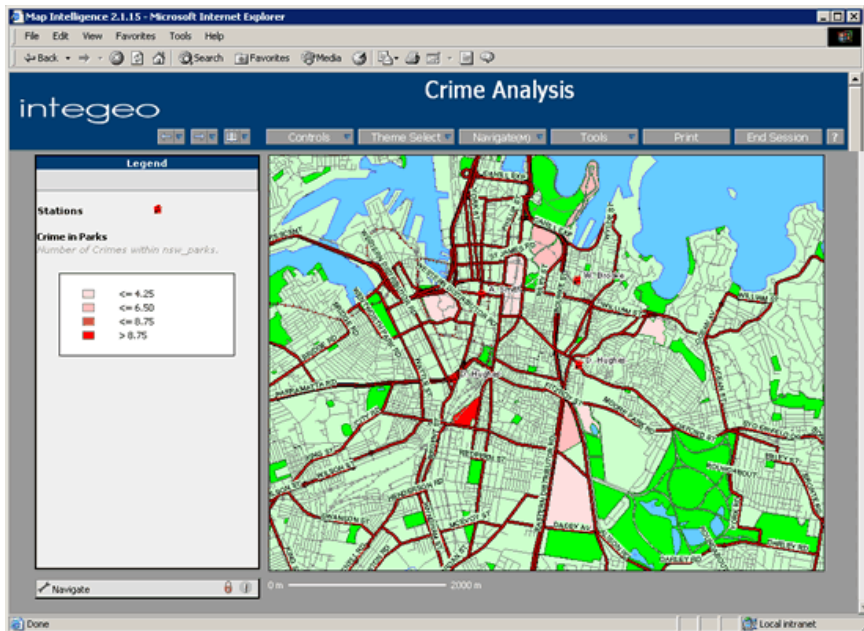
Fig 3. The Mapping Viewer displaying a Region Relationship layer.

AREA GROUP LAYER

Area Group layers also correspond to existing areas on a map. As for **Region Relationship layers**, the displayed theme is based on data attribute values, but in this case no spatial calculation is required. Instead, a column in your business data is designated to have values that match a column in the map data. For example, an existing map layer of suburbs may correspond to a data column for suburbs where the values are the suburb names. Then, for transaction data that represents customer complaints and that also contains a suburb column, it is possible to make a cross-reference between the transaction and the map area using the suburb name. An example that would use this correlation is displaying a theme on a suburb's area on the map that reflects the most common complaint type received from that suburb.
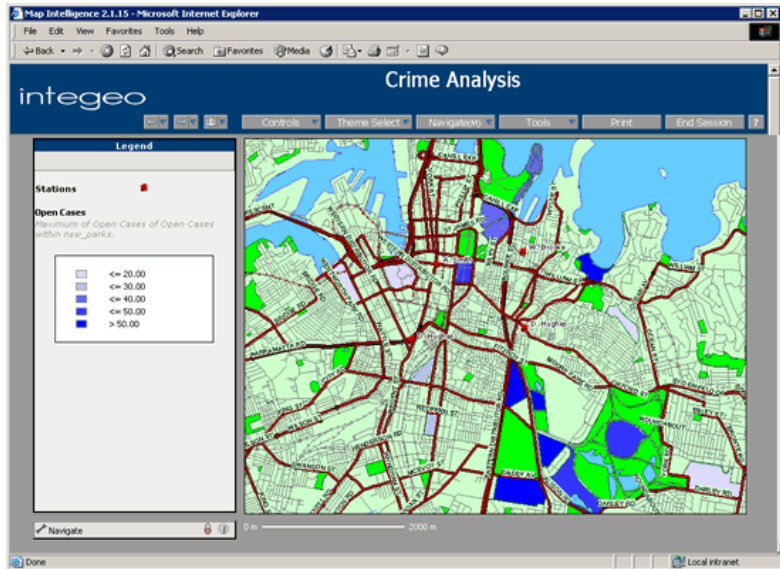
Fig 4. The Mapping Viewer displaying an Area Group layer.

Like built-in map layers, Map Intelligence layers also have a specific order in which they are placed on the map. **Point layers** are placed on top of **Radius Relationship layers**, which in turn sit on top of the built-in map layers. **Region Relationship** and **Area Group layers** shade existing built-in layers.

THE MAPPING VIEWER

WHAT IS A MAPPING VIEWER?

The Mapping Viewer is launched in a web browser after a request has been made to the Map Intelligence server. It displays the configured Map Intelligence layers overlaid on a map specified by the Layer Designer.

☞ Note: The Mapping Viewer may have been configured to display in an embedded browser on a dashboard frame.

The Mapping Viewer also provides a number of controls and features that allow you to navigate around the map or to change the theme displayed on the map. A number of tools are also available from the Mapping Viewer that allow you to perform high-level analysis.

ACCESSING THE MAPPING VIEWER FROM THE DASHBOARD CLIENT

Map Intelligence allows you to view a set of results from a dashboard and project them onto a geographical map for spatial analysis.

Map Intelligence launches a Mapping Viewer from within the dashboard that displays points and relationships on a map based on layers configured by the Layer Designer. You can slice and dice data on the dashboard and project the desired results onto the Mapping Viewer. When viewing the map, you can analyze your data further using the controls available from the Mapping Viewer.

The Mapping Viewer can be accessed using a button found on the top panel of the dashboard – provided that one was configured by the Layer Designer.

☞ The Layer Designer or Client Administrator may choose to configure alternative ways to access the Mapping Viewer.

☞ Map Intelligence does not verify that the layer properties set in the dashboard are valid when a new request is made. Instead, it will report errors as it finds them. E.g. if an invalid built-in layer has been specified for an Area Group Layer, and the layer has not been made visible, the Mapping Viewer will not report the error when you click the Map Intelligence button. The problem will only be reported when the map is made visible.

1. Click the **Map Intelligence** ![globe icon] button from the Top Panel (or any other image configured by the Layer Designer).
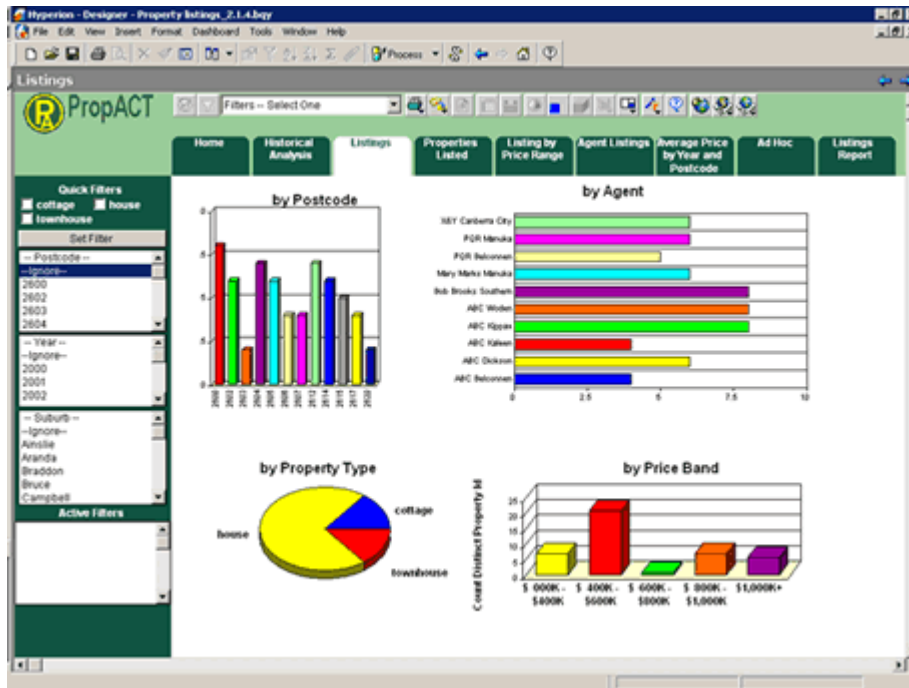

Fig 5. Sample Map Intelligence dashboard.

2. A browser will be launched with a map showing the Map Intelligence layers configured by the Layer Designer.

☞   For best results when displaying the Mapping Viewer, it is recommended that you have Internet Explorer (IE) Version 6.0 or later installed.
Note: Integeo will only support IE Version 6.0 or later.

☞   This version of Map Intelligence can run with FireFox 1.5 or later, however there are several anomalies in the performance that will not be apparent in versions of IE. There are also some FireFox'skins' that may be incompatible with Map Intelligence.
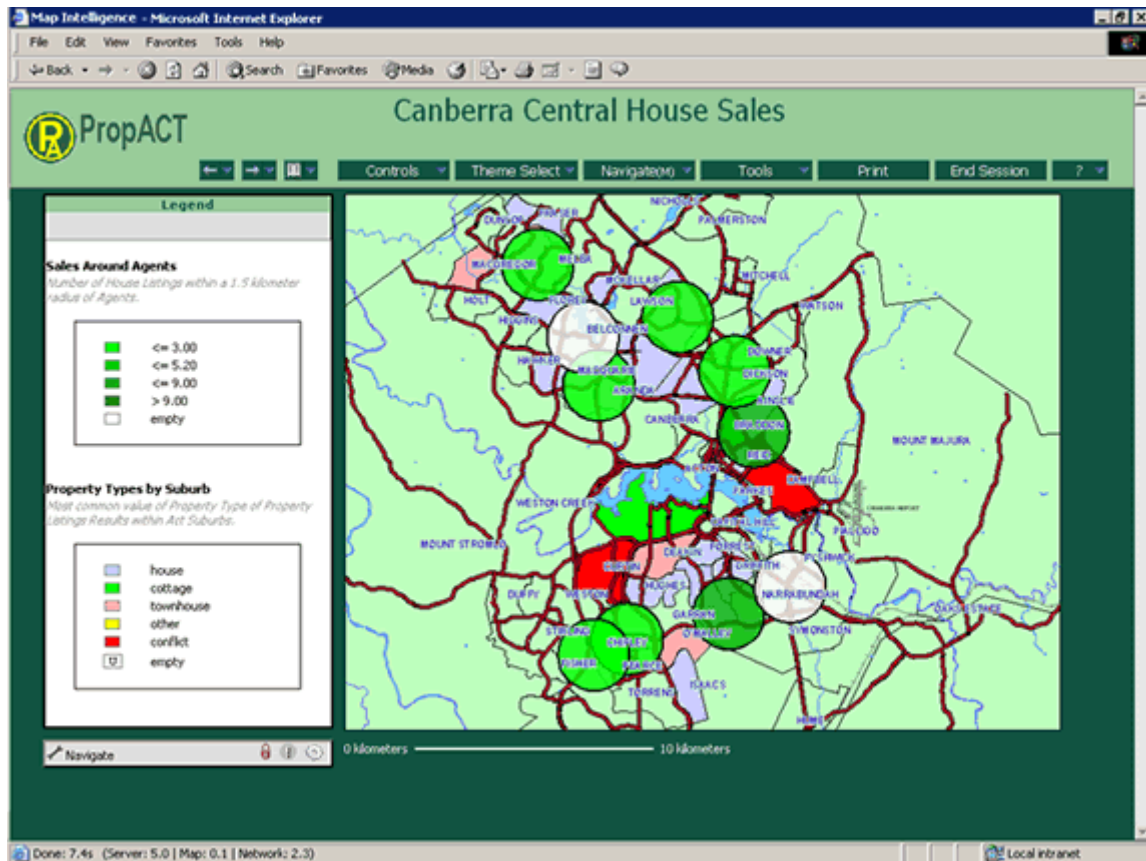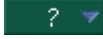
Fig 6. The Mapping Viewer.

☞   The Mapping Viewer User Manual found on the Map Intelligence Server CD, contains further
       information on the Analytical Tools and features of the Mapping Viewer, alternatively the
       Mapping Viewer Help can be accessed by clicking on the Help button [? ▼] on the Top Panel
       of the Mapping Viewer and selecting Help from the drop-down list.

ACCESSING SELECTIONS FROM DASHBOARD CLIENT

The **Selection** tool is a feature of the Mapping Viewer that allows you to select points or regions of built-in maps.
These selections are saved on the Map Intelligence Server and can be accessed from the dashboard. The data
contained in these selections will be set as filters in the dashboard.

☞   The Selection toolkit must be installed on your machine for the selected data to be returned to
       the dashboard. Please refer to the Client Installation Guide found on the Map Intelligence
       Dashboard Client CD for more information.

Further information on how to create selections in the Mapping Viewer can be found in the Mapping Viewer User Manual, found on the Map Intelligence Server CD.

The following instructions explain how to access the selections from the Dashboard Client.

1. From the dashboard click either the **Get Selections** 👆 or **Add Selections** 👆 button in the dashboard client's Top Panel.

    👉 The **Get Selections** button will clear all existing selection filters and will acquire the enabled selections as filters.

    👉 The **Add Selections** button will attach the enabled selections as filters to the ones it already has.

2. A drop-down list will appear where you can choose to get/add all the selections, or only the selections for a particular layer.

    👉 The layers available for selection are determined by the layers configured in the QIQ Retrieval Configuration frame. See the *Section8, Configure Layers for*.

3. Filters will be applied to the dashboard based on the selection.

4. To remove these filters, press the **Clear Filter** button in the dashboard.

CONFIGURATION OVERVIEW

OVERVIEW

PREREQUISITES

This section looks at the steps required in configuring your analysis layers and displaying them in the Mapping Viewer. In order to configure Map Intelligence, the following components must be installed:

- Windows System (NT, 2000, XP)

- Map Intelligence Server - Version 2.2 or higher

- Map Intelligence Dashboard Client - Version 2.2 or higher

- Hyperion Intelligence Dashboard Builder - Version 8.2 (or higher) or Hyperion System 9 BI+ Dashboard Studio

- Hyperion Intelligence Designer - Version 8.2 (or higher), Brio 6.6 or Hyperion System 9 BI+ Interactive Reporting Studio

- Internet Explorer 6.0 or higher.

The **Map Intelligence Server** needs to be installed and configured in order to make the relevant maps, colors and images available for your analysis. The Map Intelligence Server requires that a suitable mapping server be installed. The installation of the Map Intelligence Server and mapping server are beyond the scope of this manual.

☞ For instructions on how to install and configure the Map Server see the *Map Intelligence Server Installation and Administration Guide* found on the Map Intelligence Server CD.

☞ Map Intelligence requires that Hyperion Intelligence Dashboard Builder be installed on the machine that will be used in configuring the analysis layers. Hyperion Intelligence Dashboard Builder is used to create the dashboards that contain the data necessary for configuring the Map Intelligence layers. The installation of Hyperion Intelligence Dashboard Builder and the creation of a dashboard are beyond the scope of this manual.

☞ The Map Intelligence Dashboard Client cannot be installed if it does not have access to a machine which has Hyperion Intelligence Dashboard Builder installed on it.

☞ Hyperion Intelligence Dashboard Builder is only required during dashboard creation. Dashboards can be viewed using any Hyperion Intelligence viewer.

CONFIGURATION PROCESS

The process for configuring Map Intelligence is outlined below. The configuration process has been divided into sections based on the type of user required to perform the configuration.

☞ The configuration process outlined below assumes that the Map Intelligence Server and Hyperion Intelligence Dashboard Builder have been installed and that the dashboard to be used for the analysis has been created beforehand.

CLIENT ADMINISTRATOR

The Map Intelligence Client Administrator will be required to perform the following configuration tasks:

- Merge the component into a blank BQY

- Configure the component server settings

- Revert a blank BQY back to a component

☞ See Section **Error! Reference source not found.** - **Error! Reference source not found.** of this manual. This section assumes that the Map Intelligence component BQY has been successfully installed in your Integeo/Map Intelligence/Client Dashboard directory.

LAYER DESIGNER

The Layer Designer will be required to perform the following configuration tasks:

- Merge a configured component to a dashboard containing spatial data

- Configure the Map Intelligence button

- Configure the Map Settings

- Configure the Map Intelligence layers

- Configure the layers for spatial analysis.

☞ See *Sections **Error! Reference source not found.,Error! Reference source not found.** and **Error! Reference source not found.*** of this manual.

The Layer Designer may also be required to

- Upgrade existing Map Intelligence enabled dashboards with the new Map Intelligence component.

- Embed the Mapping Viewer in a dashboard frame.

ADMINISTRATOR CONFIGURATION

OVERVIEW

Map Intelligence Client Administrators are responsible for configuring the Map Intelligence component before it can be used to configure analysis layers.

Client Administrators are required to perform the following configuration tasks:

- Merge a component into a blank ESM (Editable Source Master) document

- Configure the component server settings

- Revert a blank ESM back to a component

STEP BY STEP CONFIGURATION

MERGE COMPONENT TO BLANK BQY

The Map Intelligence component comes in the form of a Hyperion Intelligence document (BQY). The component BQY contains a code section and a number of configuration frames. This component needs to be merged into a blank Editable Source Master (ESM) so the server settings can be configured. An ESM is a form of dashboard that can be manipulated by the Hyperion Intelligence Dashboard Builder to create a presentation layer for your data.

The Hyperion Intelligence Dashboard Builder comes with a Merge feature that can be used to combine two or more BQYs to produce new documents that offer a variety of capabilities and features. You can use Merge to combine the Map Intelligence component with a blank ESM using the steps outlined below.

1. Start the **Hyperion Intelligence Dashboard Builder** from Start > Programs > Hyperion Solutions > Hyperion Performance Suite > Developer Applications > Hyperion Intelligence Dashboard Builder > Dashboard Builder.

2. The Select a Framework Template window will appear.

3. You will need to create a blank ESM to merge the Map Intelligence component into. Double click on **Express Template.bqy** (or a custom template of your choice) from the **Create a Document From Template** window.

4. A blank ESM will open. Using Hyperion Intelligence Designer, save the document as **Blank esm.bqy** in your Map Intelligence folder.

5. Close the document. Click the **Start** button to move back to the **Select a Framework Template** window of the Hyperion Intelligence Dashboard Builder.

6. Click the **Import** ![import button] button. The **Import** window will appear.

7. Select the **Merge** tab. The **Merge** window will appear.

8. Ensure that the **Two to One** radio button is selected.

9. The Select and Re-order Sections checkbox should be deselected.

10. Click the **Browse** button ![browse button] on the **Primary Document** field and navigate to the location of the **Blank esm.bqy**.

11. Click the **Browse** button ![browse button] on the **Secondary Document** field and navigate to the location of **Map Intelligence Component.bqy** found in C:\Program Files\Integeo\Map Intelligence\Dashboard Client). This contains the sections necessary when configuring the layers for your analysis.

12. Click the **Browse** button ![browse button] on the **Save Path** field and give the component a unique name and click the **Save** button.

> ☞   It is important to give the component a unique name so that you do not overwrite the original Map Intelligence component.

13. Click the **Merge** button.

14. When the merge has completed, you will be presented with a report detailing the sections merged. Click the **OK** button.

15. Click the **View** button from the **Import** window to open the merged document.

CONFIGURE COMPONENT SERVER SETTINGS

Before you can create your Map Intelligence layers, you must ensure that the necessary maps, colors and images are made available to the component. Note that you can only specify files that are available from the nominated Map Intelligence Server.

The **QIQ Server Settings** frame determines the maps, colors and images available for your analysis. It is recommended that you configure the map settings before distributing the Map Intelligence component to your Layer Designers.

1. From the merged ESM, select the **QIQ Server Settings** frame from the Section/Catalog.

2. The **QIQ Server Settings** frame will appear. This frame allows you to specify the maps, colors and icons that will be available to the Layer Designer when configuring Map Intelligence layers.
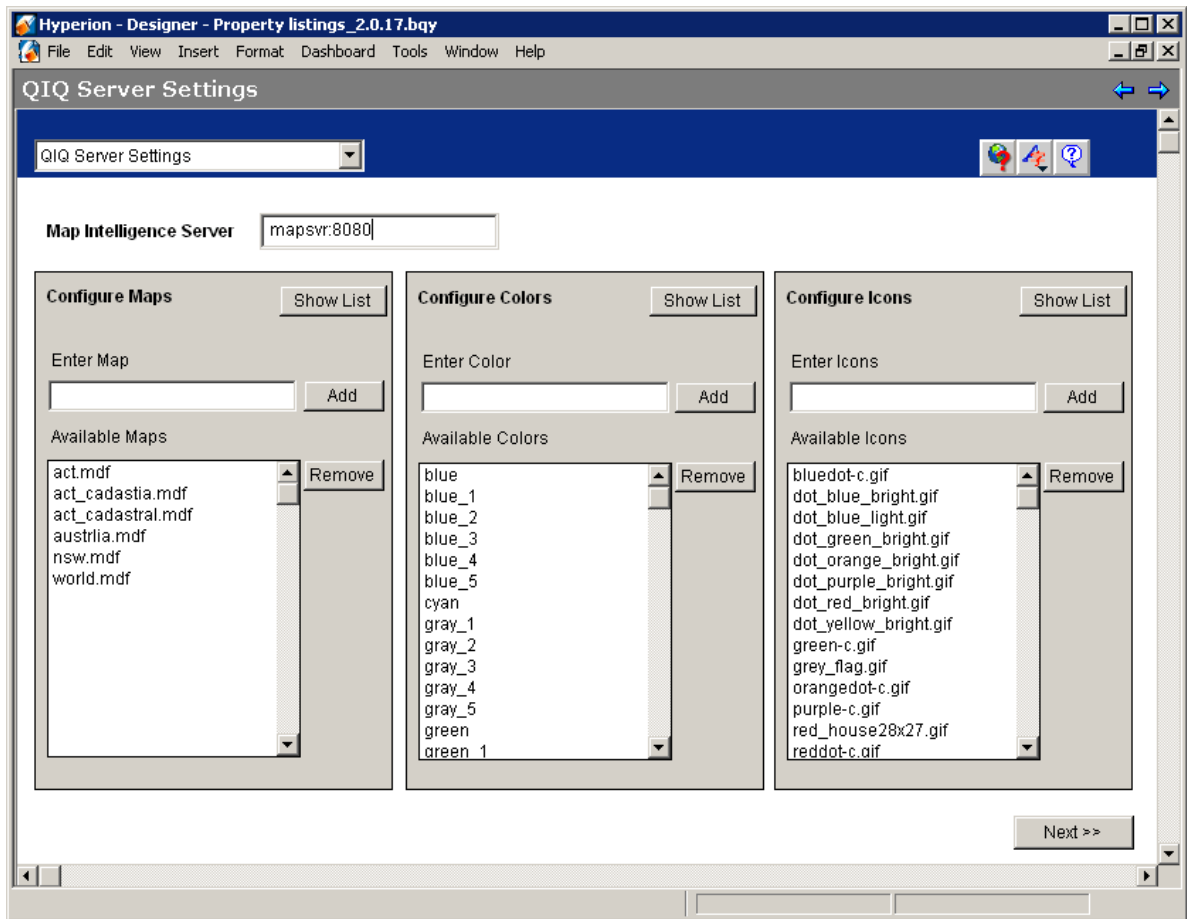
Fig 7. QIQ Server Settings frame.

☞   A number of colors and icons that are included with the Map Intelligence server are made available by default. Maps will need to be added manually as well as any additional colors and icons.

3. To add the necessary maps, you must connect to your Map Intelligence Server. In the **Map Intelligence Server** field, enter the Map Intelligence server and port. E.g. localhost:8080.

☞   You will only be able to add maps from the nominated server.

4. In the **Enter Map** field, enter the name of a valid map and click the **Add** button to add it to the list of available maps.

☞ This map name must match a valid map in the Map Intelligence Server. To get a list of valid maps, click the **Show List** button. The **Available Maps** page will appear with a list of available maps.

☞ When specifying map names in the QIQ Server Settings frame, the full name of the map (including the file extension if applicable) e.g. map.mdf, must be specified.

☞ You can remove a map from the list by selecting the map name and clicking the **Remove** button.

5. In the **Enter Colors** field, enter the name of a valid color file and click the **Add** button to add it to the list of available colors

☞ This color file must match a valid color in the Map Intelligence Server. To get a list of valid colors, click the **Show List** button. The **Available Colors** page will appear with a list of available colors.

☞ You can remove a color from the list by selecting the file and clicking the **Remove** button.

6. In the **Enter Icons** field, enter the name of a valid icon file and click the **Add** button to add it to the list of available images.

☞ This image file must match a valid image in the Map Intelligence Server. To get a list of valid images, click the **Show List** button. The **Available Images** page will appear with a list of available images.

☞ When specifying image files in the QIQ Server Settings frame, enter the full name of the file (including the file extension) e.g. whitedot.gif.

☞ You can remove an icon from the list by selecting the file and clicking the **Remove** button.

7. Save the document and give it a unique name. E.g. **Configured Component.bqy**.

REVERT BQY TO A COMPONENT

We have looked at how you can merge the Map Intelligence component into a Blank ESM and configure the necessary server settings.

Once you have configured your server settings, you need to revert the configured BQY back into its component state so Layer Designers can merge it into their dashboards.

1. From your configured BQY, go to **View > Unhide Section**.

2. The **Unhide Sections** window will appear. Select **Qiq_GIS** and click the **OK** button.

3. From the **Qiq_GIS** frame, click the **Component** button. This button deletes all user sections from the ESM, reverting it back into its component form.

4. A dialog box will appear confirming that you want to revert the BQY back to a component. Click the **Yes** button.

5. Your BQY will now only have the following component sections:

   - Qiq_GIS

   - QIQ Map Settings

   - QIQ Point Configuration

   - QIQ Area Group Configuration

   - QIQ Server Settings

   - Component Banner

   - QIQ Relationship Configuration

- Qiq_ActionLimits

- QIQ Retrieval Configuration

- Qiq_roundTripCommunicator

- QIQ Comms Configuration

- QIQ iServer Configuration

- QIQ Database Point Configuration

- QIQ Layer Association Configuration

- QIQ Server Point Configuration

6. Save your component and give it a unique name. This is now ready to be merged into a Hyperion Intelligence Dashboard Builder dashboard.

DASHBOARD CONFIGURATION

OVERVIEW

This section looks at the steps required in adding the Map Intelligence component to an existing Hyperion Intelligence Dashboard Builder dashboard.

The process for configuring the Map Intelligence component involves the following steps:

- Merge a configured component to a dashboard containing spatial data

- Configure the Map Intelligence button

- Configure the Map settings

- Configure the layers for spatial analysis

This section also looks at:

- Upgrading an existing Map Intelligence enabled dashboard with the new Map Intelligence component.

- Embedding the Mapping Viewer in a dashboard frame.

☞ This Section assumes that a Hyperion Intelligence Dashboard Builder dashboard containing spatial data has already been created. This manual does not document the steps required in creating a new dashboard. Refer to the *Dashboard Builder User Manual* installed with the Hyperion Intelligence Dashboard Builder application for more details.

☞ This Section also assumes that the Map Intelligence Server has been properly installed and all the necessary server settings have been set. See *Section 5 - Administrator Configuration* for details.

MERGE COMPONENT TO DASHBOARD

Hyperion Intelligence Dashboard Builder comes with a Merge feature that can be used to combine two or more BQYs to produce new documents that offer a variety of capabilities and features. You can use Merge to combine the configured Map Intelligence component with a Hyperion Intelligence Dashboard Builder dashboard using the steps outlined below.

1. Start the **Hyperion Intelligence Dashboard Builder** from Start > Programs > Hyperion Solutions > Hyperion Performance Suite > Developer Applications > Hyperion Intelligence Dashboard Builder > Dashboard Builder.

2. The **Select a Framework Template** window will appear.

3. Click the **Import** button. The **Import** window will appear.

> ☞ If the Import button is not visible, click the Start button on the Select a Framework Template window and it should be visible.

4. Select the **Merge** tab. The **Merge** window will appear.

5. Ensure that the **Two to One** option is selected.

6. The **Select and Re-order Sections** checkbox should be **deselected**.

7. Click the **Browse** button on the **Primary Document** field and navigate to the location of the dashboard that you want to merge the Map Intelligence component into.

8. Click the **Browse** button on the **Secondary Document** field and navigate to the location of the Map Intelligence component that your Map Intelligence Client Administrator has configured.

9. Click the **Browse** button on the **Save Path** field and enter an appropriate name for your dashboard and click the **Save** button.

10. Click the **Merge** button.

11. When the merge has completed, you will be presented with a report detailing the sections merged. Click the **OK** button.

12. Click the **View** button from the **Import** window to open the dashboard.

CONFIGURE MAP INTELLIGENCE BUTTONS

The Map Intelligence Dashboard Client installation comes with a number of images that can be configured to provide various Map Intelligence functions. This section outlines the steps for configuring a button that provides access to the Mapping Viewer. There are two additional buttons that are required in order to return selected data from the map back to the dashboard.

> 👉 It is recommended that the Map Intelligence button be configured for every frame of the dashboard. The two Selection buttons are optional.

MAP INTELLIGENCE BUTTON

1. Move to a dashboard frame through which you want to provide access to the Mapping Viewer.

2. Press **Ctrl D** to go into Design mode.

3. Drag the **Picture** object from the Graphics folder of the Section Catalog. The **Select Image** window will appear.

4. Navigate to your Map Intelligence\Images directory, select the **Map Intelligence.bmp** and click the **Open** button.

   > 👉 You can configure alternative images to provide access to the Mapping Viewer.

5. Position the graphic on the dashboard frame.

6. Double click the **Map Intelligence** button (or alternative image). The **Properties** window will appear.

7. In the **Name** field, enter **pic^Qiq_GIS^1**.

   > 👉 You can configure more than one image on a frame to have access to the Mapping Viewer. If this is the case, you must specify a unique character for the last character of the object name. E.g. pic^Qiq_GIS^2.

☞ Please note that only images with pic^Qiq_GIS^1 as their object name will have a tool tip associated with them.

8. Select the **Visible** option and click the **OK** button.
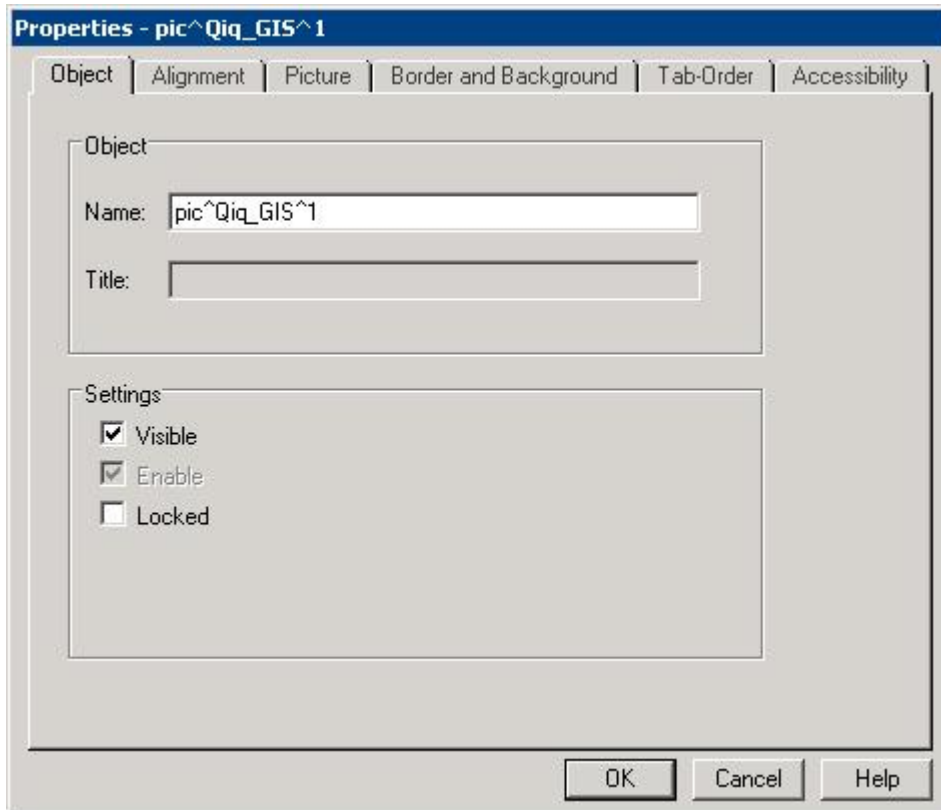
Fig 8. Properties window.

9. All Hyperion Intelligence Dashboard Builder controls contain the same line of JavaScript that determines the appropriate action to take and the appropriate control handler to call. This line of code must be entered for the Map Intelligence button. Select the button, right click and select the **Scripts** option.

10. Enter the following line of code in the Scripts Editor window:

```
ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
(this.Parent,this)
```

☞ You can copy this line of code from any other button on the frame to avoid typing mistakes.

☞ In some template versions, `ActiveSection` may take the place of `this.Parent`. This does not affect the execution of the code.

11. Click the **OK** button.

12. Repeat the steps above and add the Map Intelligence button to all frames that you want to have access to the Mapping Viewer.

13. Press **Ctrl D** to exit Design mode.

14. Save your dashboard.

SELECTION BUTTONS

The Selections tool requires you to make a request from the dashboard. This request can be made using one of the Selection buttons that are available with the Map Intelligence Dashboard Client.

There are two buttons that can be configured for the **Selection** tool.

- The **Get Selections** button will clear all existing selection filters and will acquire the new selections as filters.

- The **Add Selections** button will append new selections as filters to the existing selection filters.

☞ These buttons are optional. You can choose to make both buttons available on the frame or select from either one depending on what is most appropriate for the dashboard.

To configure the Selection buttons:

1. Move to a dashboard frame that you want to add the button to.

2. Press **Ctrl D** to go into Design mode.

3. Drag the **Picture** object from the Graphics folder of the Section Catalog. The **Select Image** window will appear.

4. Navigate to your Map Intelligence\Images directory, select **get_map_selections.bmp** and click the **Open** button.

5. Position the graphic on the dashboard frame.

6. Double click the **Get Selections** button The **Properties** window will appear.

7. In the **Name** field, enter **pic^Qiq_ActionLimits^Clear**.

8. Select the **Visible** option and click the **OK** button.

9. All Hyperion Intelligence Dashboard Builder controls contain the same line of JavaScript that determines the appropriate action to take and the appropriate control handler to call. This line of code must be entered for the Get Selections button. Select the button, right click and select the **Scripts** option.

10. Enter the following line of code in the Scripts Editor window:

```
ActiveDocument.Sections[txlMe.Text].Qiq_onControlClick
(this.Parent,this)
```

☞ You can copy this line of code from any other button on the frame to avoid typing mistakes.

☞ In some template versions, `ActiveSection` may take the place of `this.Parent`. This does not affect the execution of the code.

11. Click the **OK** button.

12. Repeat the steps above and add the Add Selections button to all frames that you want to have access to the Mapping Viewer.

13. To configure the Add Selections button, navigate to the Images directory and select add_map_selections.bmp.

14. Bring up the Properties window and set the object name to **pic^Qiq_ActionLimits^Add**.

15. Set the **Visible** option.

16. Bring up the **Scripts** window and add the line of code.

17. Position the buttons as needed.

☞ An example template **MapIntelligence_Template.bqy** with the configured Map Intelligence and Selection buttons can be found in the *Map Intelligence/Dashboard Client* directory.

EMBEDDING THE MAPPING VIEWER IN A DASHBOARD FRAME.

By default, clicking the Map Intelligence button will open the Mapping Viewer in a separate browser window. By using the Embedded Browser control in Hyperion Intelligence Designer, Layer Designers can embed the Mapping Viewer in a dashboard frame.

☞ This feature is not available for Brio version 6.6 users.
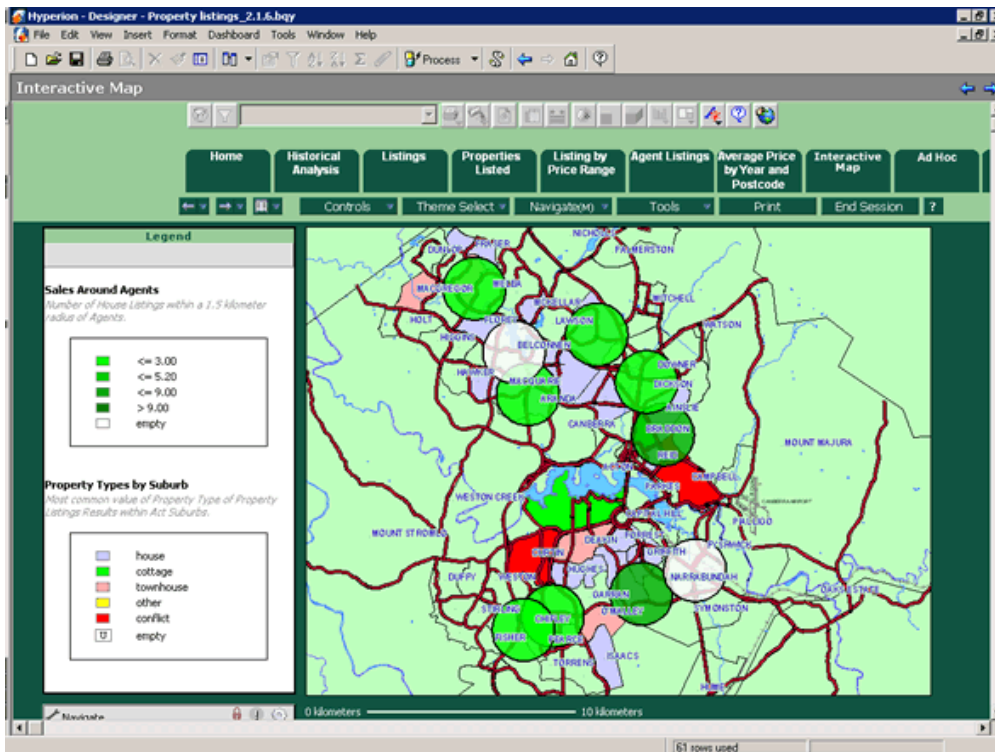
Fig 9. Example of the Mapping Viewer embedded in a dashboard frame.

1. Using the **Hyperion Dashboard Builder**, create a new frame in your dashboard in which to embed the Mapping Viewer.

☞   As the Mapping Viewer uses a large screen area, it is advisable to use a frame template with horizontal navigation.

☞   The process for creating a dashboard frames is documented in the Hyperion Intelligence Dashboard Builder manual.

To embed the Mapping Viewer in the dashboard:

1. From your BQY, move to the new dashboard frame that you want to embed the Mapping Viewer in.

2. Press **Ctrl D** to go into Design mode.

3. Drag the **Embed Browser** object from the Controls folder of the Section Catalog to the new frame. Resize the **Embedded Browser** to make full use of the frame.

4. Double click the **Embedded Browser**. The **Properties** window will appear.

5. In the **Name** field, enter **IntegeoInternalBrowser**
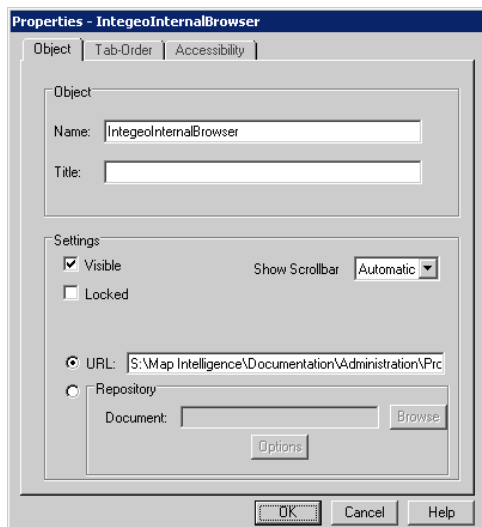
Fig 10. Properties window.

6. Select the **Visible** option and click the **OK** button.

7. Press **Ctrl D** to exit Design mode.

8. Click the **Map Intelligence Button** to open the Mapping Viewer in the dashboard frame.

☞ Please wait while the Mapping Viewer loads.

☞ You can access the Mapping Viewer frame using the dashboard navigation, however to refresh the Mapping Viewer to reflect any changes made to in the dashboard, for example setting limits, you must click the Map Intelligence button.

☞ If a larger map area is required in the browser, in the Properties window set **Show Scrollbar** to **Always.**

☞ Embedded browsers do not display a browser status bar, therefore the Show Timings feature will not be available.

UPGRADING EXISTING MAP INTELLIGENCE ENABLED DASHBOARDS

The Hyperion Intelligence Update utility is required to upgrade Map Intelligence enabled dashboards with the new Map Intelligence BQY component. To function properly, this utility needs to be copied to the *Integeo/Map Intelligence/Dashboard Client/Upgrade* directory.

The BQY Upgrade Finder can be used to locate and copy the Hyperion Intelligence Update utility.

1. From the *Integeo/Map Intelligence/Dashboard Client/Upgrade* directory, double click on the **BQY Upgrade Finder.exe**.

2. A dialog box will appear stating the Hyperion Update utility has been found. Click the **OK** button to copy the utility.

3. A confirmation dialog box will appear confirming the Upgrade.exe was successfully copied. Click the **OK** button.

    The following files will now be in your *Integeo/Map Intelligence/Dashboard Client/Upgrade* directory

    - Upgrade.exe

    - UpdtStr.ini

    ☞   You may need to refresh your file browser, by pressing F5, to see the files.

4. Click on the **Upgrade.exe** file, the **Hyperion Intelligence Update** dialog box will appear.

5. For **Upgrade Method**, select the **Upgrade One** radio button.

6. For **Backup Options**, select the **Place Upgrade in Upgrade Folder** radio button.

7. Click the **Browse** button ⬚ on the **Document to Upgrade** field and navigate to the location of the dashboard that you want to upgrade the Map Intelligence component into.

8. Click the **Browse** button ⬚ on the **Save Path** field and navigate to the location you wish to save your dashboard.

9. Click the **Upgrade** button. Your dashboard will now be upgraded with the new Map Intelligence component. When the upgrade has completed, you will be presented with a report detailing the sections upgrade. Click the **OK** button to close the report.

10. Click the **Close** button on the Hyperion Intelligence Update dialog box.

    ☞   For a more information on configuring the Hyperion Intelligence Update utility, see the Hyperion Intelligence Update documentation.

CONFIGURE MAP SETTINGS

The Map Settings frame allows you to configure the settings for your Map Intelligence Server as well as the properties of the underlying map to be used for your analysis.

You will need to configure the map settings for your dashboard before you can configure the Map Intelligence layers that you wish to be displayed in the Mapping Viewer.

1. Open your Hyperion dashboard and move to the **QIQ Map Settings** frame.

Fig 11. QIQ Map Settings frame.

MAP INTELLIGENCE SETTINGS SECTION

The **Map Intelligence Settings** section allows you to specify the Map Intelligence Server and underlying map to be used for the analysis.

Fig 12. Map Intelligence Settings section.

1. From the **Map Name** drop-down list, select the map that you want to use to display your analysis layers on.
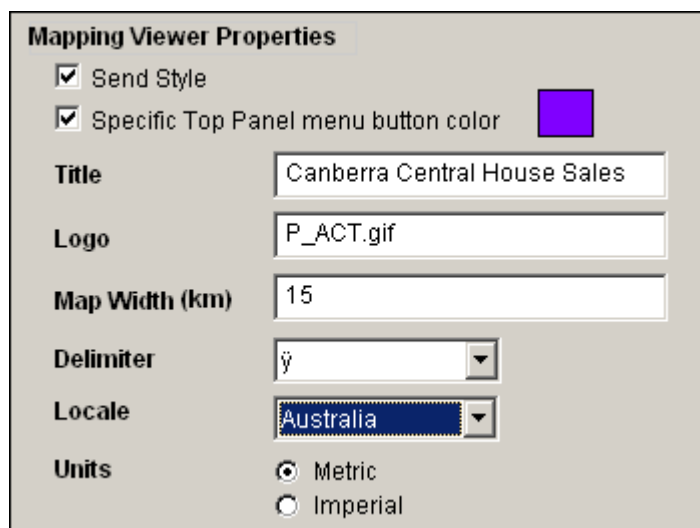
☞   The Map Name drop-down list contains all the maps that have been added during the Map Intelligence server configuration. Consult your Map Intelligence Administrator if there are no maps available from the drop-down list.

2. In the **Map Intelligence Server** field, enter the Map Intelligence server and port that you wish to use.

MAPPING VIEWER PROPERTIES SECTION

The **Mapping Viewer Properties** section allows you to configure properties of the Mapping Viewer that is launched from the dashboard.

Fig 13. Mapping Viewer Properties section.

1. Select the **Send Style** checkbox if you want the Mapping Viewer to reflect the style sheet applied to the dashboard.

2. To change the color of the Top Panel menu buttons, select the **Specific Top Panel menu button color** checkbox and select a new color from the color picker.

3. In the **Title** field, enter the title that you want to appear in the Top Panel of the Mapping Viewer (See Figure *below*).

   ☞   This field is optional.

4. In the **Logo** field, enter the file name of the image that you want to appear in the Top Panel of the Mapping Viewer (see Figure *below*).

   ☞   This field is optional.

   ☞   The specified file must be located in the Images folder of the Map Intelligence directory on the server machine.

   ☞   The recommended size for the image is 70 x 70 pixels. Larger images may cover some elements or change the format of the Mapping Viewer.
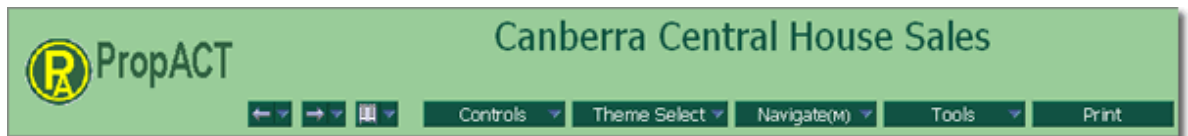
Fig 14. Example of the Top Panel in the Mapping Viewer Showing Title and Logo.

☞ If you are embedding the Mapping Viewer in a dashboard frame, it is recommended you leave the Title and Logo fields blank to maximize the screen area.

5. In the **Map Width** field, specify the map width that you would initially like to display in the Mapping Viewer.

☞ This field is optional. If you do not specify a map width, Map Intelligence will apply a default width that will display all your points. In this case, it is recommended that you select Default as your Center Point option.

6. From the **Delimiter** drop-down list, select a character to act as a separator for your data as it is sent to the Map Intelligence Server.

☞ The delimiter character acts as a separator for your data as it is sent to the Map Intelligence Server. You must select a character that does not exist within your data to avoid errors. The default character is ÿ.

7. From the **Locale** drop-down list, select the locale to use for your analysis. The labels that appear in the layer configuration frames and Mapping Viewer may vary depending on the locale set.

☞ Setting a locale will automatically set the Units option to the default option for that locale. E.g. Setting the USA locale will automatically result in the Imperial units option to be selected.

8. From the **Units** drop-down, select the unit of measurement that you would like to use for your analysis.

Imperial units = miles, feet

Metric units = kilometers, meters

CENTER POINT PROPERTIES SECTION

The **Center Point** option allows you to specify a point to appear as the center of the map launched by the Mapping Viewer. The following center point options are available.

Default – selects a center point by plotting all the points specified by the layers and takes the center point of all the points.
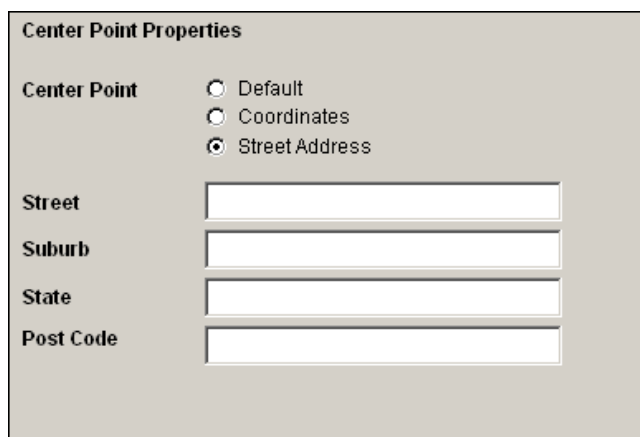
☞ If you select the Default option, it is recommended that you do not specify a map width for your map. If you set a map width it will be ignored.

Coordinates – allows you to specify a coordinate to set as the center point for the map. If you select this option, you will need to specify the latitude and longitude values for your center point.

☞ You must specify a map width or the default center point will be used.

Street Address – allows you to specify a valid street address to set as the center point for the map. If you select this option, you will need to specify the street/address, suburb/city, state and post code/zip code values for your center point.

☞ You must specify a map width or the default center point will be used.

Fig 15. Center Point Properties section.

1. Select the desired **Center Point** radio button.

☞   If you selected the Coordinates option, a Latitude and Longitude field will appear. Enter valid values in these fields

☞   If you selected the Street Address option, Street/Address, Suburb/City, State and Post Code/Zip Code fields will appear. Enter valid values in these fields. Note that the labels may vary depending on the locale set.

EMBEDDED BROWSER SETTINGS

1. If you wish the map to reflect points selected using the Selection Tool, click the **Synchronize the Embedded Browser with Selection** checkbox.

CHARACTER ENCODING

1. In the **Character Encoding** field enter the character encoding that you are using in your bqy, an example would be, for the Thai language **TIS-620**.

    This field can be left blank if you are using the default character encoding **ISO-8859-1** (Latin Alphabet No.1)

    ☞   A list of supported encodings can be found in *Appendix A – Supported Encodings*.

APPLYING YOUR SETTINGS

1. Click the **Apply** button to save your map settings.

    ☞   Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

☞   If you have made changes to the Map Settings frame and want to revert back to the previously saved values, click the Refresh button.

☞   For maps with projected coordinate systems, when setting Center Point properties, the Y coordinate (or Northing) is set in the latitude field and the X coordinate (or Easting) in the longitude field. These settings are in the units of the underlying map, usually meters rather than degrees.

☞   For maps with projected coordinate systems the longitude is set to the column of the X coordinate and the latitude is set to the column of the Y coordinate in Point layers.

2.   Click the **Next** button to move to the **QIQ iServer Settings** frame.

CONFIGURE ISERVER SETTINGS

The settings on this page allow Map Intelligence to be invoked from a dashboard running in a Hyperion Performance Suite iServer.

To configure the iServer Settings, please read the separate *iServer Usage Guide* found on the Map Intelligence Dashboard Client CD.
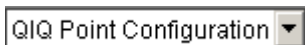
LAYER CONFIGURATION

LAYER OVERVIEW

Maps are made up of layers. Map features such as roads, parks or traffic lights are held on different layers. Each map is composed of one or more layers that are superimposed to give the final map *look and feel*. Map Intelligence currently supports four types of map layers. See *Section **Error! Reference source not found. - Error! Reference source not found. - Layer Types** for a full description of Map Intelligence layers.

- Point layers

- Radius Relationship layers

- Region Relationship layers

- Area Group layers

The Map Intelligence component comes with configuration frames that allow you to create your Map Intelligence layers.

CONFIGURATION FRAME TOP PANEL FEATURES

All Map Intelligence configuration frames contain the same set of drop-down lists and buttons on the Top Panel of the frame. The Configuration Frame Top Panel features are listed below.

| QIQ Point Configuration ▼ | **Navigation** |

Allows you to move from one Map Intelligence configuration frame to another.

Map Intelligence Help

Opens the Map Intelligence Dashboard Client Help.

Language

Allows you to select the language that the operational text and tool tips will appear in.

Dashboard Tool Tips

Activates tool tips and annotations that describe the major navigational and functional elements of the dashboard.

CONFIGURE POINT LAYERS

☞ For a description of Point layers, see *Section Section **Error! Reference source not found.** - **Error! Reference source not found.** - Point Layers*

1. Select **QIQ Point Configuration** frame from the **Navigation** drop-down menu at the top left of the screen.
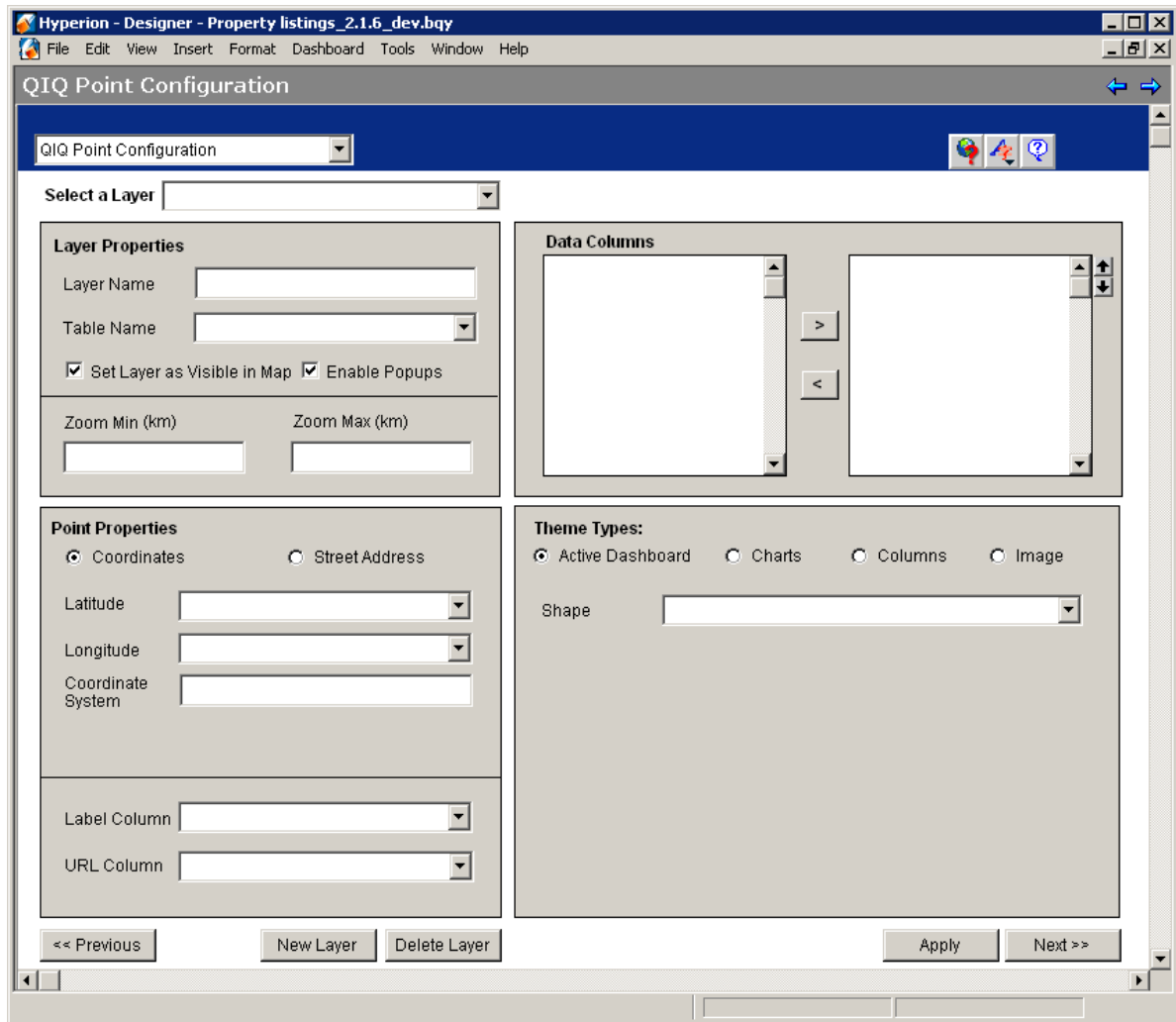
Fig 16. QIQ Point Configuration frame.

2. Click the **New Layer** button. This clears the fields and allows you to set the properties for a new layer.

LAYER PROPERTIES SECTION

Fig 17. Layer properties section.

1. In the **Layer Name** field, enter a title for the layer (only letters, numbers and spaces may be used. Spaces can be used, but must not be used at the beginning or end of the layer name).

2. From the **Table Name** drop-down list, select the Results / Table section which contains the data to be used as points for this layer.

☞   If the selected Results / Table section contains a column called Item, this column will be ignored as 'Item' is a keyword in JavaScript. If you do have an 'Item' column, it is recommended that this be renamed before selecting the section from the Table Name drop-down list.

3. Select the **Set Layer as Visible in Map** checkbox if you wish this particular layer to be visible when you first access the Mapping Viewer.

4. Select the **Enable Popups** checkbox if you wish information popups to be enabled for the layer when you first access the Mapping Viewer.

5. You can specify a range in which the layer will be visible on the map by entering a **Zoom Min** and **Zoom Max** value.
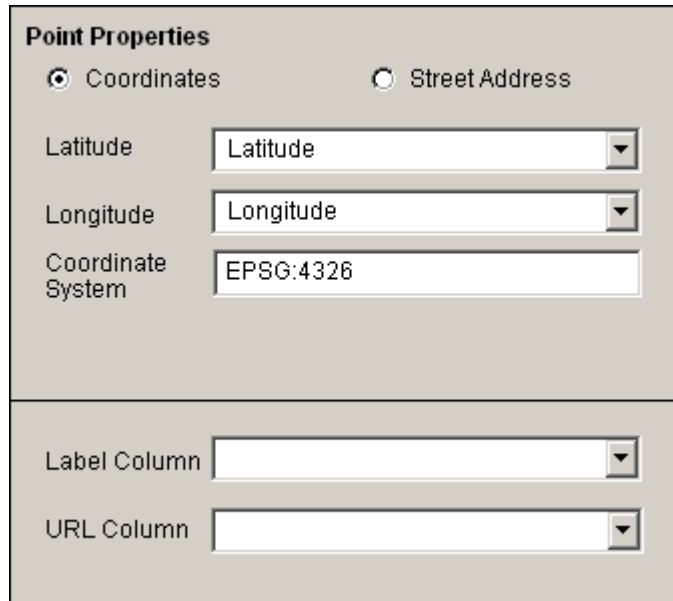
☞   The layer will only be visible if the current map width is within the specified minimum and maximum zoom values.

POINT PROPERTIES SECTION

1. The **Point Properties** section allows you to select the method for plotting the points on the map. Points can be mapped using coordinates or valid street addresses. Select the appropriate radio button.

    If you select the **Coordinates** radio button, you must specify the columns that contain the Latitude and Longitude values for each point. You can also specify the coordinate systems to use for the layer if you do not intend to use the inherent coordinate system of the selected map.

Fig 18. Latitude/Longitude option.
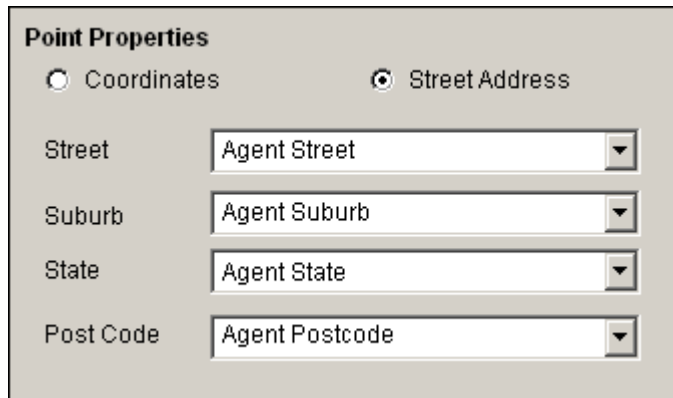
☞   A coordinate system provides a frame of reference for measuring locations on the surface of the earth. A full list of acceptable coordinate systems is available in the Coordinate Systems document found on the Map Intelligence Dashboard Client CD, an example for MapInfo is shown in the picture above. This field is optional.

☞   For maps with projected coordinate systems, when setting Center Point properties, the Y coordinate (or Northing) is set in the latitude field and the X coordinate (or Easting) in the longitude field. These settings are in the units of the underlying map, usually meters rather than degrees.

☞   For maps with projected coordinate systems the longitude is set to the column of the

X coordinate and the latitude is set to the column of the Y coordinate in Point layers.

If you select the **Street Address** radio button, you must specify the columns that contain the Street/Address, Suburb/City, State and Post Code/Zip Code values for each point.

Fig 19. Street Address option.

👉 The drop-down labels will vary depending on the locale set.

👉 The Street Address option will only work if a geocoder has been installed or in ArcIMS if the map layer is geocoded.

2. From the **Label Column** drop-down list, select a column that contains the values to appear on the labels for each point in the layer.

👉 Applying a label for each point in the layer is optional.

3. From the **URL Column** drop-down list, select a column that contains URLs associated with the points in the layer.

☞   Multiple URLs can be assigned to a point using semi-colons to separate names and values.

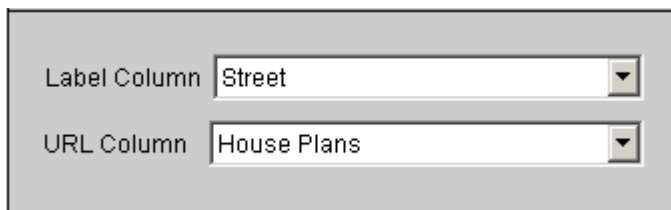In the bqy URL column; enter the name and the URL in the following format

Name;Url;<space>Name;Url

For example:

"**Integeo Web Site;http://www.integeo.com; Report;report.pdf**"

☞   From Mapping Viewer, the **Active Points** tool can be used for points that have been assigned to a single URL. If a point has been assigned to multiple URLs, the active links can be viewed from the **Information Panel**. For further information on the Active Points and Information sections see the Mapping Viewer User Manual on the Map Intelligence Server CD.

☞   Applying a URL for points in the layer is optional.

Fig 20. Label and URL Columns

DATA COLUMNS SECTION

Data columns can be sent to the Mapping Viewer to provide more information about each point.

1. From the **Data Columns** list box, select the columns that you want to make available to the Mapping Viewer.

> 👉 The values contained in these columns will appear in a popup window when you move your mouse over a point in the map.

2. Select the data columns that you want to display from the left hand list box and click the `>` button.
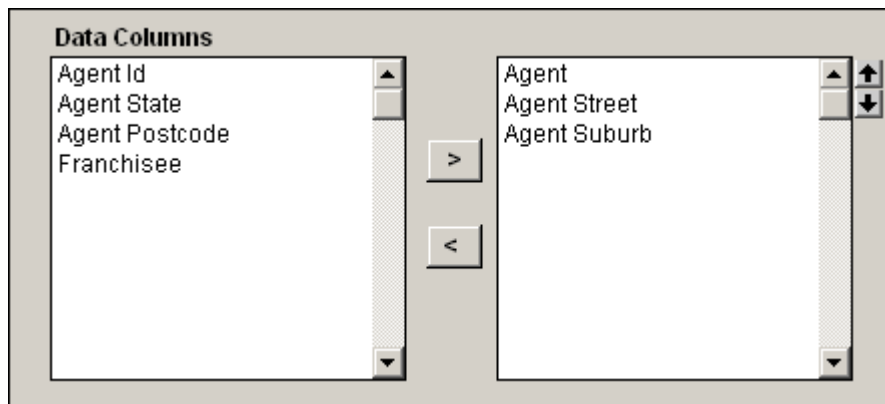

Fig 21. Data Columns sections.

THEME TYPES SECTION

The **Theme Types** section allows you to select the method for applying a theme for your layer. Setting a theme involves color-coding or assigning images to points in the layer.

The following theme options are available:

Active Dashboard

This option generates themes based on the legend items of charts embedded on the current dashboard frame. The list of available themes available in the Mapping Viewer will vary depending on the frame used to access the Map Intelligence Server.

☞   The dashboard frame that the map is launched from must contain a chart whose columns exist in the Results/Table section that the Point layer is created from. If there is no chart on the frame or if there is no chart column from that particular table section, points from that layer will not be displayed on the map. As a result, any other layer that makes use of that Point layer will not be displayed on the map.

To set a theme based on the active dashboard:

1. Select the **Active Dashboard** radio button.

2. From the **Shape** drop-down list, select the shape that you want to use to represent each point in the layer.

Fig 22. Active Dashboard theme configuration.

☞   This option only requires you to specify a shape for the theme, as the legend items of the charts on the current dashboard frame will determine the color of each point.

Charts

This option generates themes based on the legend items of specified charts. The list of available themes will be the same regardless of the frame used to access the Mapping Viewer.

To set a theme based on a chart:

1. Select the **Charts** radio button.

2. From the **Shape** drop-down list, select the shape that you want to use to represent each point in the layer.

> ☞ This option only requires you to specify a shape for the theme, as the legend items of the specified charts will determine the color of each point.

3. The list box on the left hand side contains a list of all available charts. Select the charts that you want to base the themes of your points on.

4. Click the ![>] button.

5. You can sort the order of the selected charts by clicking the up or down arrow buttons next to the list box. The theme generated from the first chart on the list will be displayed when you first access the Mapping Viewer.
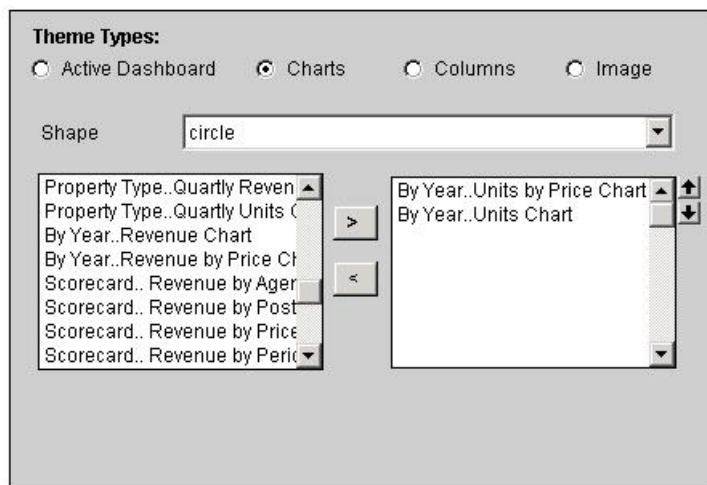

Fig 23. Charts theme configuration.

Columns

This option allows you to specify an image for values in columns available from the specified Results or Table section. Map Intelligence allows you to configure themes for multiple columns

To set a theme based on column values:

1. Select the **Columns** radio button.

2. The **Column Name** drop-down list contains all selected data columns. Select a column to configure from the drop-down list. The two list boxes below the drop-down will be populated with relevant values.

> ☞ The list box on the left displays a list of available images that can be associated with a column value.

> ☞ The list box on the right displays a list of all values from the selected column.

3. Select an image and a column value and click the **Add** button.

4. The specified theme condition will be displayed at the bottom list box.

5. Configure all other desired values.

> ☞ You can remove a theme condition by selecting the condition from the list box and clicking the **Remove** button.

> ☞ You do not need to assign an icon for every single column value. Map Intelligence will automatically assign a default icon for all values that have not been configured.

6. Repeat the steps above if you want to assign themes to other columns in your results set.

7. From the Default Theme drop-down list, select the theme that you want to be displayed when the Mapping Viewer is accessed for the first time.

Fig 24. Columns theme configuration.

Image

This option allows you to specify an image to represent all the points in the layer.

To set an icon for all points in the layer:

1. Select the **Image** radio button.

2. From the **Image** drop-down list, select the icon that you want to use to represent each point in the layer.

Fig 25. Image theme configuration.

3. After you have configured the themes or images for the layer, click the **Apply** button.

    ☞   Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

4. The layer will be saved and will now be available from the **Select a Layer** drop-down list.

    ☞   Layers will be displayed on the map in the order that they appear in the Select a Layer drop-down list. E.g. the first layer in the drop-down list will be the top-most layer in the map.

    ☞   You can delete a layer by selecting a layer from the Select a Layer drop-down list and clicking the **Delete** button.

Note on data format

Map Intelligence, by default, will place commas in numbers greater than 999. You can change the format by specifying the column format in the dashboard table. This only applies to columns with numeric values.

CONFIGURE DATABASE POINT LAYERS

    ☞   Database Point Layers have been designed to be used with MapXtreme.

When large amounts of data are sent to the server, the response time will decline as the amount of point data increases. For example, access to 2 million sales points across the whole USA maybe required, if you have no idea where the end user will navigate or zoom to.

Database point layers have been designed for when large numbers of points need to be available on the map. When using Database Point layers, only the metadata describing how to access the point data from a database and how to theme the points is sent to the server. The server loads the points as they are required to give a faster response time.

In the example above, there may be 2 million sales points, but if the points are only visible when the user zooms into a map width of less than 10 miles, then only the points for that particular area need to be displayed. In this case maybe only 20,000 points would need to be loaded and shown on the map.

☞ In order for Database Point Layers to work, you must first process the data in the BQY, this ensures all column names are available to the Database Point Layer configuration screen and points can be themed appropriately, if required.
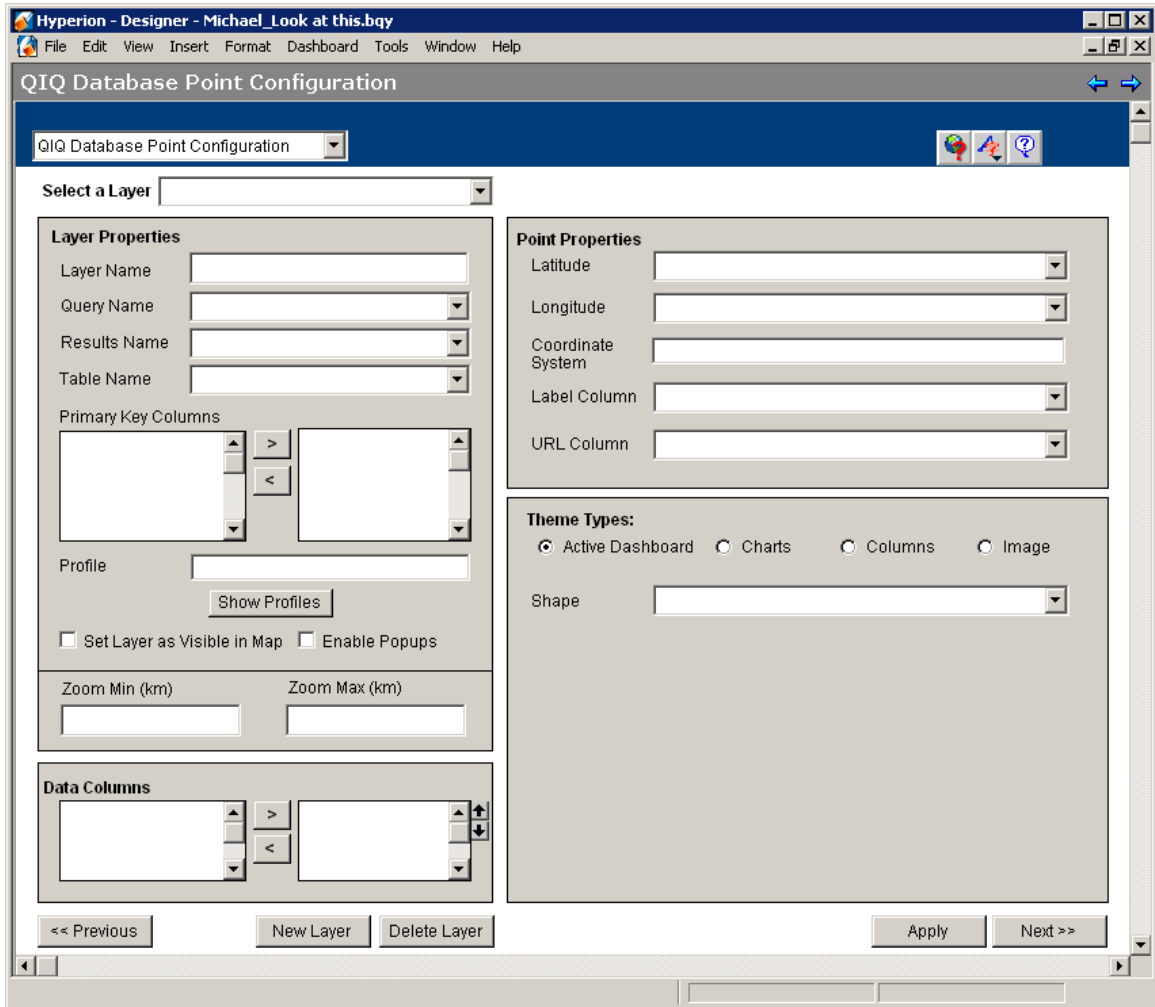

Fig 26. QIQ Database Point Configuration frame.

1. Select **QIQ Database Point Configuration** frame from the **Navigation** drop-down menu at the top left of the screen.

2. Click the **New Layer** button. This clears the fields and allows you to set the properties for a new layer.

Fig 27. Layer Properties Section.

1. In the **Layer Name** field, enter a title for the layer (only letters, numbers and spaces may be used. Spaces can be used, but must not be used at the beginning or end of the layer name).

2. From the **Query Name** drop-down list, select the Query section which is being used for the basis of the database point layer.

3. From the **Results Name** drop-down list, select the Results section that is created by the selected Query section.

4. If your dashboard is using a table, from the **Table Name** drop-down list, select the Table section which contains data to be used for the database point layer. If no table exists, select the same Results section used in Results Name field.

☞ If the selected Results / Table section contains a column called Item, this column will be ignored as 'Item' is a function in JavaScript. If you do have an 'Item' column, it is recommended that this be renamed before selecting the section from the Table Name drop-down list.

5. Select all **Primary Key Columns** from the left hand list box and click the [>] button.

6. In the **Profile** field, enter the Database Profile Name. Click the **Show Profiles** button, the Database Profiles page will appear, displaying a list of existing Database Profiles.

☞ Database Profiles are created by Server Administrators. Server Administrators should see the Database Profiles section in the Server Installation and Administration Guide found on the Map Intelligence Server CD.

7. Select the **Set Layer as Visible in Map** checkbox if you wish this particular layer to be visible when you first access the Mapping Viewer.

8. Select the **Enable Popups** checkbox if you wish information popups to be enabled for the layer when you first access the Mapping Viewer.

9. You can specify a range in which the layer will be visible on the map by entering a **Zoom Min** and **Zoom Max** value.

☞ The layer will only be visible when the current map width is within the specified minimum and maximum zoom values.

DATA COLUMNS SECTION

Data columns can be sent to the Mapping Viewer to provide more information about each point.

1. From the **Data Columns** list box, select the columns that you want to make available to the Mapping Viewer.

☞ The values contained in these columns will appear in a popup window when you move your mouse over a point in the map.

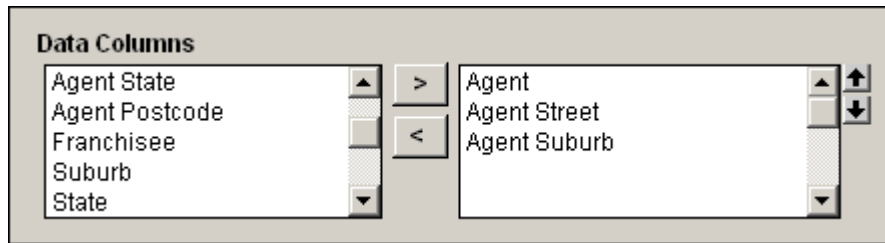2. Select the data columns that you want to display from the left hand list box and click the [>] button.

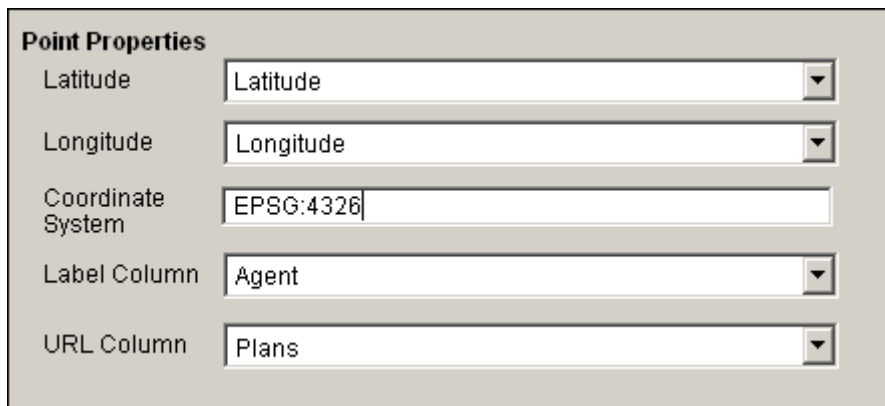Fig 28. Data Columns sections.

POINT PROPERTIES SECTION

Fig 29. Point Properties section.

1. From the **Latitude and Longitude** drop-down lists select the columns that contain the Latitude and Longitude values for each point.

☞ You can also specify the coordinate system to use. A coordinate system provides a frame of reference for measuring locations on the surface of the earth. A full list of acceptable coordinate systems is available in the *Coordinate Systems* document found on the Map Intelligence Dashboard Client CD. This field is optional.

☞ For maps with projected coordinate systems, when setting Center Point properties, the Y coordinate (or Northing) is set in the latitude field and the X coordinate (or Easting) in the longitude field. These settings are in the units of the underlying map,

usually meters rather than degrees.

☞ For maps with projected coordinate systems the longitude is set to the column of the X coordinate and the latitude is set to the column of the Y coordinate in Point layers.

2. From the **Label Column** drop-down list, select a column that contains the values to appear on the labels for each point in the layer.

☞ Applying a label for each point in the layer is optional.

3. From the **URL Column** drop-down list, select a column that contains URLs associated with the points in the layer.

☞ Multiple URLs can be assigned to a point using semi-colons to separate names and values.

In the bqy URL column; enter the name and the URL in the following format

Name;Url;<space>Name;Url

For example:

"Integeo Web Site;http://www.integeo.com; Report;report.pdf"

☞ From Mapping Viewer, the **Active Points** tool can be used for points that have been assigned to a single URL. If a point has been assigned to multiple URLs, the active links can be viewed from the **Information Panel**. For further information on the Active Points and Information sections see the Mapping Viewer User Manual on the Map Intelligence Server CD.

☞ Applying a URL for points in the layer is optional.

THEME TYPES SECTION

The Theme Types section is discussed in *Section **Error! Reference source not found.** - **Error! Reference source not found.** - Configure Point Layers, Theme Types Section.*

COMPLETING THE DATABASE POINT LAYER CONFIGURATION

1. After you have configured the themes or images for the layer, click the **Apply** button.

   ☞ Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

2. The layer will be saved and will now be available from the **Select a Layer** drop-down list.

   ☞ Layers will be displayed on the map in the order that they appear in the Select a Layer drop-down list. E.g. the first layer in the drop-down list will be the top-most layer in the map.

   ☞ You can delete a layer by selecting a layer from the Select a Layer drop-down list and

clicking the **Delete** button.

Note on data format

Map Intelligence, by default, will place commas in numbers greater than 999. You can change the format by specifying the column format in the dashboard table. This only applies to columns with numeric values.

CONFIGURE SERVER POINT LAYERS

☞ Server Point Layers have been designed to be used with ArcIMS.

A standard Map Intelligence Point Layer (as discussed in *Section **Error! Reference source not found. - Error! Reference source not found. - Configure Point Layers***) transfers data from a Dashboard or document to a Map. The data on the map is filtered and themed according to filters and settings in your Dashboard. A **Server Point Layer** filters and themes data that is already present in the map.

That is, if you already have a map layer that contains all your company's spatial data and you have the same data in a results / table section of your dashboard, you can use a Server Point Layer to theme and filter that data in the map layer, without the need for all the data to be sent to the server.

☞ *If your spatial data is in your map layer, but you do not have the same data in your dashboard data source, you can click on the **Available Layers** button on the Server Point Layer configuration frame. When you choose a map layer, you will get an option to export the data set to a csv file for use in your dashboard. This manual does not document the steps required in creating BQYs or dashboards. Refer to your Hyperion Intelligence documentation for more details.*

☞ *Alternatively, if you are using ArcSDE to provide map layers to ArcIMS with an underlying database then you can make queries to that database to extract the necessary point data to the BQY.*

☞ *Queries used as a basis for Server Point Layers should not contain joins.*

☞ *In order for Server Point Layers to work, you must first process the data in the BQY, this ensures all column names are available to the Server Point Layer configuration screen and points can be themed appropriately, if required.*
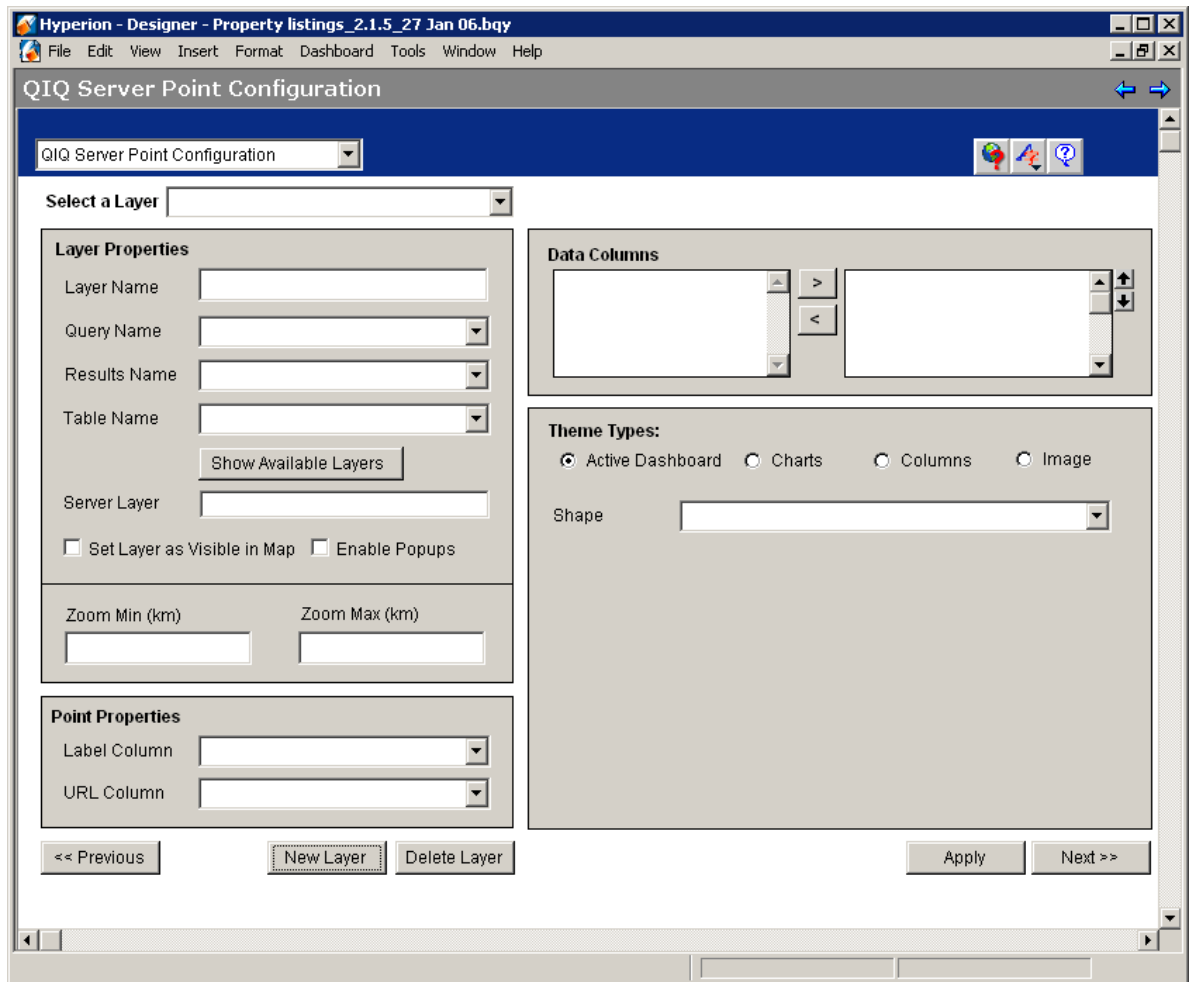

Fig 30. QIQ Server Point Configuration frame.

1. Select **QIQ Server Point Configuration** frame from the **Navigation** drop-down menu at the top left of the screen.

2. Click the **New Layer** button. This clears the fields and allows you to set the properties for a new layer.

LAYER PROPERTIES SECTION

Fig 31. Layer Properties Section

1. In the **Layer Name** field, enter a title for the layer (only letters, numbers and spaces may be used. Spaces can be used, but must not be used at the beginning or end of the layer name).

2. From the **Query Name** drop-down list, select the Query section which is being used for the basis of the Server Point layer.

3. From the **Results Name** drop-down list, select the Results section that is created by the selected Query section.

4. If your dashboard is using a table, from the **Table Name** drop-down list, select the Table section which contains data to be used for the database point layer. If no table exists, select the same Results section used in Results Name field.

> ☞ If the selected Results / Table section contains a column called Item, this column will be ignored as 'Item' is a function in JavaScript. If you do have an 'Item' column, it is recommended that this be renamed before selecting the section from the Table Name drop-down list.

5. In the **Server Layer** field, enter the name of the built-in layer that contains your point data.
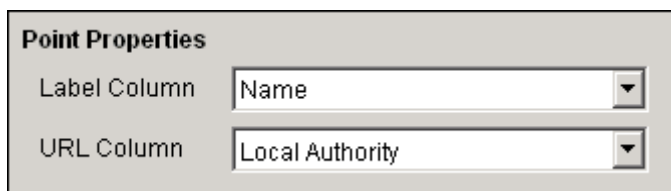
☞   Click the **Show Available Layers** button to get a list of the built-in map layers for the selected map. The Map Intelligence Query Tool page will appear. Select your map from the Choose Map drop-down list and select the map layer from the Choose Layer drop-down list that contains your point data.

☞   In the current version of the Dashboard Client, selecting a layer from the Choose Layer drop-down list in the Map Intelligence Query tool, does not automatically populate the Server Layer field in the Relationship Layer configuration screen.

6.   Select the **Set Layer as Visible in Map** checkbox if you wish this particular layer to be visible when you first access the Mapping Viewer.

7.   Select the **Enable Popups** checkbox if you wish information popups to be enabled for the layer when you first access the Mapping Viewer.

8.   You can specify a range in which the layer will be visible on the map by entering a **Zoom Min** and **Zoom Max** value.

☞   The layer will only be visible when the current map width is within the specified minimum and maximum zoom values.

POINT PROPERTIES SECTION

Fig 32. Point Properties section.

1. From the **Label Column** drop-down list, select a column that contains the values to appear on the labels for each point in the layer.

    ☞   Applying a label for each point in the layer is optional.

2. From the **URL Column** drop-down list, select a column that contains URLs associated with the points in the layer.

    ☞   Multiple URLs can be assigned to a point using semi-colons to separate names and values.

    In the bqy URL column; enter the name and the URL in the following format

    Name;Url;<space>Name;Url

    For example:

    "Integeo Web Site;http://www.integeo.com; Report;report.pdf"

    ☞   From the Mapping Viewer, the **Active Points** tool can be used for points that have been assigned to a single URL. If a point has been assigned to multiple URLs, the active links can be viewed from the **Information Panel**. For further information on the Active Points and Information sections see the Mapping Viewer User Manual on the Map Intelligence Server CD.

☞   Applying a URL for points in the layer is optional.

DATA COLUMNS SECTION

Data columns can be sent to the Mapping Viewer to provide more information about each point.

1. From the **Data Columns** list box, select the columns that you want to make available to the Mapping Viewer.

☞   The values contained in these columns will appear in a popup window when you move your mouse over a point in the map.

2. Select the data columns that you want to display from the left hand list box and click the [>] button.
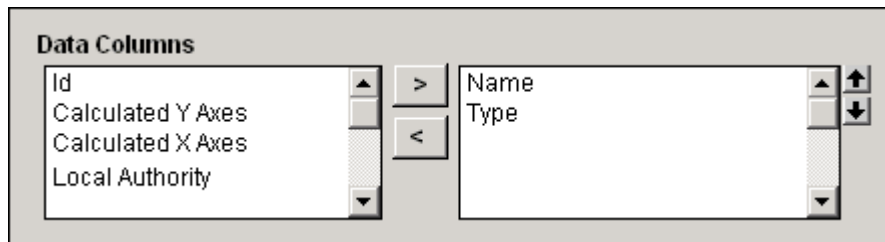
Fig 33. Data Columns sections.

THEME TYPES SECTION

The Theme Types section is discussed in *Section **Error! Reference source not found.** - **Error! Reference source not found.** - Configure Point Layers, Theme Types Section*.

COMPLETING THE SERVER POINT LAYER CONFIGURATION

1. After you have configured the themes or images for the layer, click the **Apply** button.

☞ Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

2. The layer will be saved and will now be available from the **Select a Layer** drop-down list.

☞ Layers will be displayed on the map in the order that they appear in the Select a Layer drop-down list. E.g. the first layer in the drop-down list will be the top-most layer in the map.

☞ You can delete a layer by selecting a layer from the Select a Layer drop-down list and clicking the **Delete** button.

Note on data format

Map Intelligence, by default, will place commas in numbers greater than 999. You can change the format by specifying the column format in the dashboard table. This only applies to columns with numeric values.

☞ For a description of Relationship Layers, see *Section* ***Error! Reference source not found.*** *- Error! Reference source not found.* *- Relationship Layers*

Fig 34. QIQ Relationship Configuration screen.

3.   Select **QIQ Relationship Configuration** frame from the **Navigation** drop-down menu at the top left of the screen.

4.   Click the **New Layer** button. This clears the fields and allows you to set the properties for the layer.

RELATIONSHIP PROPERTIES SECTION

1. Enter a title for the layer in the **Layer Name** field (only letters, numbers and spaces may be used. Spaces can be used, but should not be used at the beginning or end of the layer name).

2. Select the **Set Layer as Visible in Map** checkbox if you wish this particular layer to be visible when you first access the Mapping Viewer.

3. Select the **Enable Popups** checkbox if you wish information popups to be enabled for the layer when you first access the Mapping Viewer.

4. You can specify a range in which the layer will be visible on the map by entering a **Zoom Min** and **Zoom Max** value.

> ☞   The layer will only be visible if the current map width is within the specified minimum and maximum value.

Fig 35. Relationship Properties section

RELATIONSHIP TYPE SECTION

1. The **Relationship Type** section allows you to specify the type of relationship to display on the map.
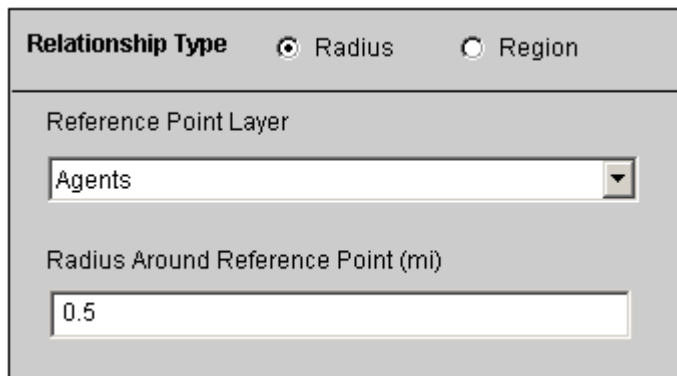
The **Radius** option displays the relationship between two Point layers as color-coded or hatched circles around a particular point.

The **Region** option displays the relationship between a Point layer and a built-in map layer as color-coded or hatched regions on the map layer.

☞ In this version of Map Intelligence, hatches for Radius Relationship layers are only available for MapXtreme.

2. Select the appropriate radio button.

3. If you select the **Radius** option, you will need to specify the **Reference Point Layer** to use and the radius of the circle that you want to display on the map.

☞ The Reference Point Layer refers to the Point layer that you want to base the relationship on. Points in this layer become the center point of the shaded circles.

Fig 36. Relationship configuration for Radius option.

4. If you select the **Region** option, the **Reference Region Layer** field will appear. Enter the built-in map layer that you want to shade.

☞ Click the **Show Available Layers** button to get a list of the built-in map layers for the selected map. The **Map Intelligence Query Tool** page will appear. Select your map file from the **Choose Map** drop-down list and select a map layer from the Choose Layer drop-down list.

☞ Only layers containing regions can be used as reference layers.

☞   When you choose a map layer, you will get an option to export the data set to a csv file. The entire data set will be exported, regardless of any limits set on the page.

☞   Built-in layers are arranged in a particular order on the map. When selecting a built-in layer to shade, all map layers that sit under the selected layer will be covered by the selected color or hatch.

Fig 37. Relationship configuration for Region option.

FACT POINTS SECTION

1. The fact point layer is the layer that you are relating to the reference layer. From the **Fact Point Layer** drop-down list, select the Point Layer containing the points that you want to geographically relate to the reference layer.

☞   When related to a built-in region layer the points will be grouped according to which regions they are contained in. When related to another Point Layer, the points will be grouped according to which points in the reference layer they fall within the given radius of.

2. From the **Fact Point Column**, select the fact column to use to paint the regions. The data for this column will be extracted from the points and aggregated according to the geographical grouping of the points.

DATA PROPERTIES SECTION

The **Data Properties** section allows you to specify the type of aggregation and aggregation function to use for the layer. Refer to the *Aggregation Options* section at the end of this Section to configure the aggregation for your layer.

VISUAL THEME PROPERTIES SECTION

The **Visual Theme Properties** are discussed in the **Aggregation Options** section.

SAVING YOUR CONFIGURATION

3. After you have configured your aggregation and threshold conditions, click the **Apply** button. The layer will be saved and will now be available from the **Select a Layer** drop-down list.

☞ Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

☞ Layers will be displayed on the map in the order that they appear in the Select a Layer drop-down list. E.g. the first layer in the drop-down list will be the top-most relationship layer in the map. Region layers will remain at the layer of the built-in layer in the map.

☞ You can delete a layer by selecting a layer from the Select a Layer drop-down list and clicking the **Delete** button.

☞   Clicking the **Next** button will take you to the QIQ Area Group Configuration Screen.

Note on data format

Map Intelligence, by default, will place commas in numbers greater than 999. You can change the format by specifying the column format in the dashboard table. This only applies to columns with numeric values.

CONFIGURE AREA GROUP LAYERS

☞   For a description of Area Group Layers, see *Section **Error! Reference source not found.** - **Error! Reference source not found.** - Area Group Layer.*
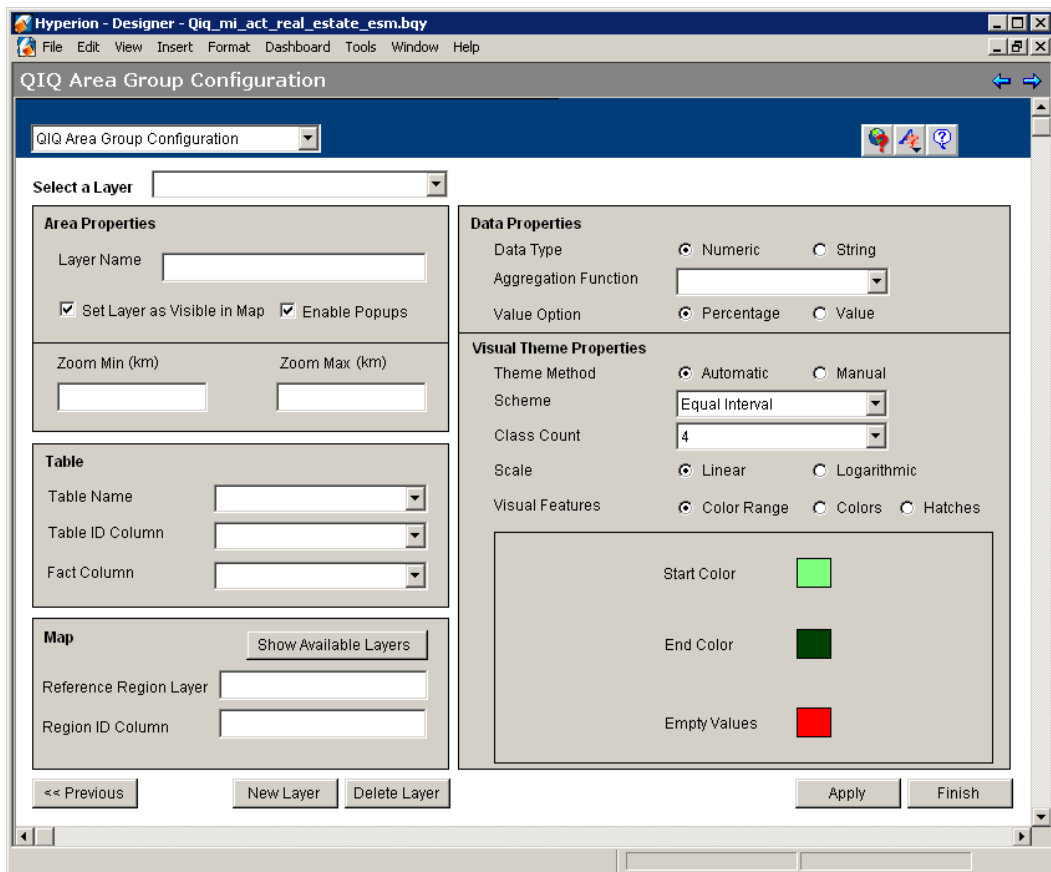
Fig 38. QIQ Area Group Configuration Frame

1. Select **QIQ Area Group Configuration** frame from the **Navigation** drop-down menu at the top left of the screen.

2. Click the **New Layer** button. This clears the fields and allows you to set the properties for the layer.

AREA PROPERTIES SECTION

1. In the **Layer Name** field, enter a title for the layer (only letters, numbers and spaces may be used. Spaces can be used, but must not be used at the beginning or end of the layer name).

2. Select the **Set Layer as Visible in Map** checkbox if you wish this particular layer to be visible when you first access the Mapping Viewer.

3. Select the **Enable Popups** checkbox if you wish information popups to be enabled for the layer when you first access the Mapping Viewer.

4. You can specify a range in which the layer will be visible on the map by entering a **Zoom Min** and **Zoom Max** value.

　　　　☞　　The layer will only be visible if the current map width is within the specified minimum and maximum value.

Fig 39. Area Properties section.

TABLE SECTION

1. The **Table** section allows you to configure the necessary table settings for the layer. From the **Table Name** drop-down list, select the Results / Table section which contains the data to be used for this layer.

> ☞ If the selected Results / Table section contains a column called Item, this column will be ignored as 'Item' is a keyword in JavaScript. If you do have an 'Item' column, it is recommended that this be renamed before selecting the section from the Table Name drop-down list.

2. Area Group layers require a union between a column in your Results section and a column in the built-in map layer that you want to shade. You need matching values from these two columns for the Area Group layer to work.

3. From the **Table ID Column** drop-down list, select the column from your Results section to use as a basis for the Area Group layer.

4. From the **Fact Column** drop-down list, select the column that contains the values to be measured for this layer.

> ☞ If you are doing a numeric aggregation, you do not need to specify a fact column when using the Count function.

Fig 40. Configured Table section.

MAP SECTION

1. The **Map** section allows you to configure the necessary map settings for the layer. In the **Reference Region Layer** field, enter the built-in map layer that you want to shade or apply a color to.

    ☞ Click the Show Available Layers button to get a list of the built-in map layers for the selected map. The Map Intelligence Query Tool page will appear. Select your map from the Choose Map drop-down list and select a map layer from the Choose Layer drop-down list.

    ☞ Only layers containing regions can be used as reference layers.

    ☞ When you choose a map layer, you will get an option to export the data set to a csv file. The entire data set will be exported, regardless of any limits set on the page.

    ☞ Built-in layers are arranged in a particular order on the map. When selecting a built-in layer to shade, all map layers that sit under the selected layer will be covered by the selected color or hatch.

    ☞ If you select a map layer from the Choose Layer drop-down list, a table will appear with the columns available for that layer and the values available from that column.

2. In the **Region ID Column** field, specify the built-in map layer column that contains values that match the ones in the specified **Table ID Column**.

Fig 41. Configured Map section.

DATA PROPERTIES SECTION

The **Data Properties** section allows you to specify the type of aggregation and aggregation function to use for the layer. Refer to the *Aggregation Options* section at the end of this Section to configure the aggregation for your layer.

VISUAL THEME PROPERTIES

The Visual Theme Properties are discussed in the Aggregation Options section.

3. After you have configured your aggregation and threshold conditions, click the **Apply** button. The layer will be saved and will now be available from the **Select a Layer** drop-down list.

> ☞ Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

> ☞ You can delete a layer by selecting a layer from the Select a Layer drop-down list and clicking the **Delete** button.

Note on data format

Map Intelligence, by default, will place commas in numbers greater than 999. You can change the format by specifying the column format in the dashboard table. This only applies to columns with numeric values.

CONFIGURING THE DATA PROPERTIES AND VISUAL THEME PROPERTIES SECTIONS OF THE RELATIONSHIP LAYER AND AREA GROUP LAYER CONFIGURATION SCREENS

Area Group and Relationship Layers require you to specify threshold conditions based on a Numeric or String aggregation.

NUMERIC AGGREGATION

Map Intelligence allows you to perform a function on values from a specified fact column. The specified built-in map layer will then be shaded according to the resulting values. The numeric functions available include: Count, Sum, Min, Max, Mean and Median.
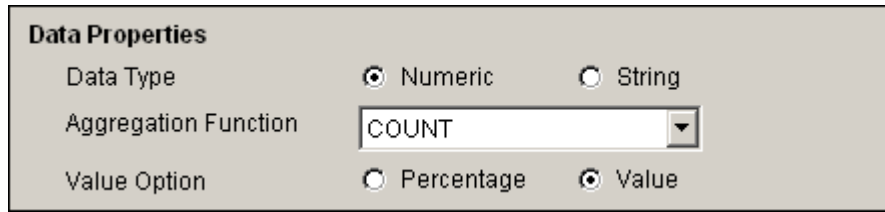
To configure a numeric aggregation

In the **Data Properties** Section

1. For **Data Type**, click the **Numeric** radio button.

2. From the **Aggregation Function** drop-down list, select the function to use for the layer.

3. For **Value Option**, click either the **Percentage** or **Value** radio button.

    ☞   The aggregates can be used as the raw aggregate value or as a percentage of the total aggregate over the Fact Point layer.

    ☞   Note that only one color and one hatch layer can be displayed simultaneously for a particular built-in layer. If you have multiple layers that use the same built-in layer, you can switch between these using the Theme Select option from the Mapping Viewer.

Fig 42. Data Properties Section showing the numeric option selected

CONFIGURING THE VISUAL THEME PROPERTIES SECTION BASED ON A NUMERIC AGGREGATION

The **Visual Theme Properties** section allows you to specify the shading to use for the layer based on thresholds applied to the data. You can shade a region by applying a color or hatch to a built-in map layer or a circle around a point.

☞ In this version of Map Intelligence, hatches for Relationship layers are only available for MapXtreme.

There are two methods for applying themes:

- Automatic

- Manual

AUTOMATIC METHOD

In the **Visual Theme Properties** section

1. For **Theme Method**, click the **Automatic** radio button.

2. From the **Scheme** drop-down list, select a color scheme.

    You can use a standard classification scheme if you want to group similar values to look for patterns in the data. You can choose from three schemes for grouping data values into classes based on how the data values are distributed.

    - **Equal Interval**: The difference between the high and low values is the same for every class.

- **Quantile**: Each class contains an equal number of features.

- **Standard Deviation**: Features are placed in classes based on how much their values vary from the mean.

3. From the **Class Count** drop-down list, select the number of colors to appear in your shading range.

   3. If **Equal Interval** was selected for **Scheme**, for **Scale**, click either the **Linear** or **Logarithmic** radio button.

   4. If **Standard Deviation** was selected for **Scheme**, for **Std Deviation Multiplier** enter the multiplying factor.
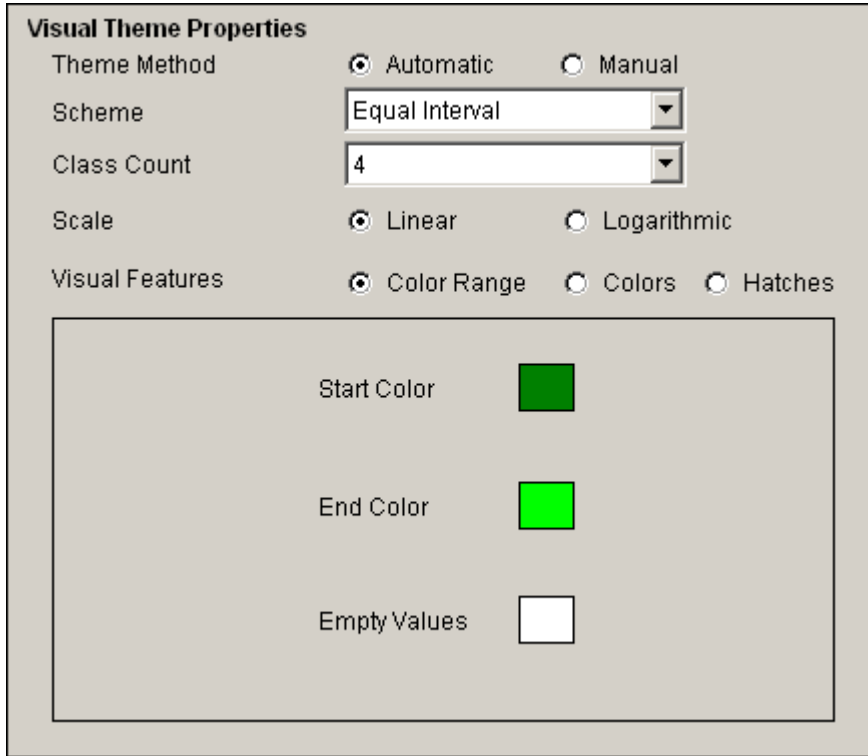
There are three options for selecting the **Visual Features**:

- **Color Range:** Allows you to choose a start and end color.

- **Colors:** Allows you to specify a particular color for each class.

- **Hatches**. Allows you to specify a particular hatch for each class.

Selecting Color Range

1. Click the **Color Range** radio button.

2. Click the **Start Color** colored rectangle.

3. Select the start color from the color window and click **OK**.

4. Click the **End Color** colored rectangle.

5. Select the end color from the color window and click **OK**.

6. Click the **Empty Values** colored rectangle.

7. Select a color for any region that does not contain any values and click **OK**.

☞   The colored rectangles will change to the new color chosen after each selection.

Fig 43. Visual Theme Properties Section showing Color Range Selected.

Selecting Colors

1. Click the **Colors** radio button.

2. Click the **Class #1** colored rectangle.

3. Select a color from the color window and click **OK**.

4. Repeat Steps 2 and 3 for each class listed.

5. Click the **Empty Values** colored rectangle.

6. Select a color for any region that does not contain any values and click **OK**.

☞   The colored rectangles will change to the new color after each selection.

☞   If no color picker appears, ensure that you have installed the Map Intelligence Dashboard Client.

Visual Theme Properties

Theme Method	⦿ Automatic	○ Manual
Scheme	Equal Interval ▼	
Class Count	7 ▼	
Scale	⦿ Linear	○ Logarithmic
Visual Features	○ Color Range ⦿ Colors ○ Hatches	

Class #1 ☐   Class #5 ☐
Class #2 ☐   Class #6 ☐
Class #3 ☐   Class #7 ☐
Class #4 ☐

Empty Values ☐
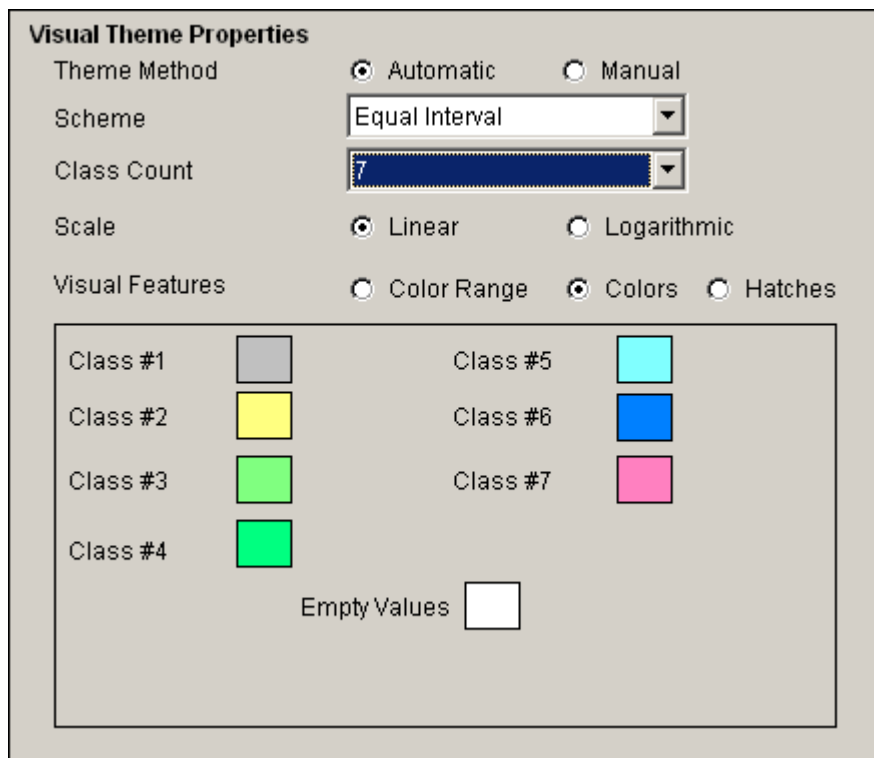
Fig 44. Visual Theme Properties Section showing Colors Selected.

Selecting Hatches

1.   Click the **Hatches** radio button.

2.   From the **Class #1** drop-down list, select a hatch.

☞   You can view available hatch styles by clicking **Show Hatches** button.

3. Repeat Steps 2 and 3 for each class listed.

4. From the **Empty Values** drop-down list, select a hatch for any region that does not contain any values.

Fig 45. Visual Theme Properties Section showing Hatches Selected.

Manual Method

In the **Visual Theme Properties** section

1. For **Theme Method**, click the **Manual** radio button.

2. For **Shading Option**, click either the **Color** or **Hatch** radio button.

3. Enter a value in the **Threshold** field.

4. From the list box, select the color or hatch that you want to associate with the specified threshold value.

5. Click the [>] button. The threshold condition will be displayed in the list box on the right hand side of the frame.

6. Configure all other threshold conditions.

7. Select a color or hatch from the **Values Outside Threshold** drop-down list to represent any values that may be outside the specified threshold values.

Fig 46. Threshold Properties section: Manual Theme Method.

Map Intelligence includes an **'unshaded color'**. If this color is chosen for Relationship layers with radius properties hidden circles are removed completely so that they do not appear on the map, nor can they be exported. Hidden circles do not have popup information.

For a Region Relationship layer or an Area Group layer, the 'unshaded color' is used for regions that should be left as they would appear without that layer. For example a country on a map that should not be colored by an Area Group layer would be left unshaded.

If the **'transparent color'** is applied to a Relationship layer with a radius property, it causes the 'transparent' circles to be displayed as see-through on the map, except for a surrounding border. It will display popup information. The 'transparent option' applied to a Region Relationship layer or Area Group layer makes the regions on the map transparent so that the underlying areas can still be seen. This can be used for suburbs or small regions of a map which would not usually be visible on the map.

☞ Null values are ignored on aggregations so an empty area may contain points or rows with null values. For instructions on how to display null values, refer to the Displaying

Null Values section at the end of this Section.

STRING AGGREGATION

Map Intelligence allows you to perform a function on string values from a specified fact column. String aggregations require you to specify a color/hatch condition for a specific value instead of a threshold. The string functions available include:

Most Common – this function applies the condition if the nominated value is the most common value in the region.

Uniform – this function applies the condition if the nominated value is the only value from the specified column in the region.

Majority – this function applies the condition if the nominated value makes up more than half of the values in the region.

To configure a string aggregation:

1. Select the **String** radio button from the **Data Type** section.

2. Select the function to use for the layer from the **Aggregation Function** drop-down list.

3. The **Threshold Properties** section allows you to specify the shading to use for the layer and configure threshold values and images to use for the layer.

4. You can shade a region by applying a color or hatch to a built-in map layer or circle around a point. Select the appropriate radio button from the **Shading Option** section.

   ☞ In this version of Map Intelligence, hatches for Relationship layers are only available for MapXtreme.

5. The top list box will display all available values from the specified fact column. Select a value from the list box or enter a value from the **Value** field to apply a condition to.

   ☞ The Value field takes precedence over the selection made from the list box. If you have entered a value and made a selection from the list box, the color/hatch will be

applied to the value that you entered.

6. From the list box, select the color or hatch that you want to associate with the specified threshold value.

7. Click the [>] button. The threshold condition will be displayed in the list box on the right hand side of the frame.

8. Configure all other conditions.

9. Select a color or hatch from the **Other** drop-down list to represent any values that have not been assigned with a specific condition.

10. Select a color or hatch from the **Conflict** drop-down list to represent any region or circle that does not meet any specified condition. E.g. A Conflict condition will be returned if the 'Uniform' function has been set and there is more than one type of value present in the region.

11. Select a color or hatch from the **Empty** drop-down list to represent any region or circle that does not contain any values.
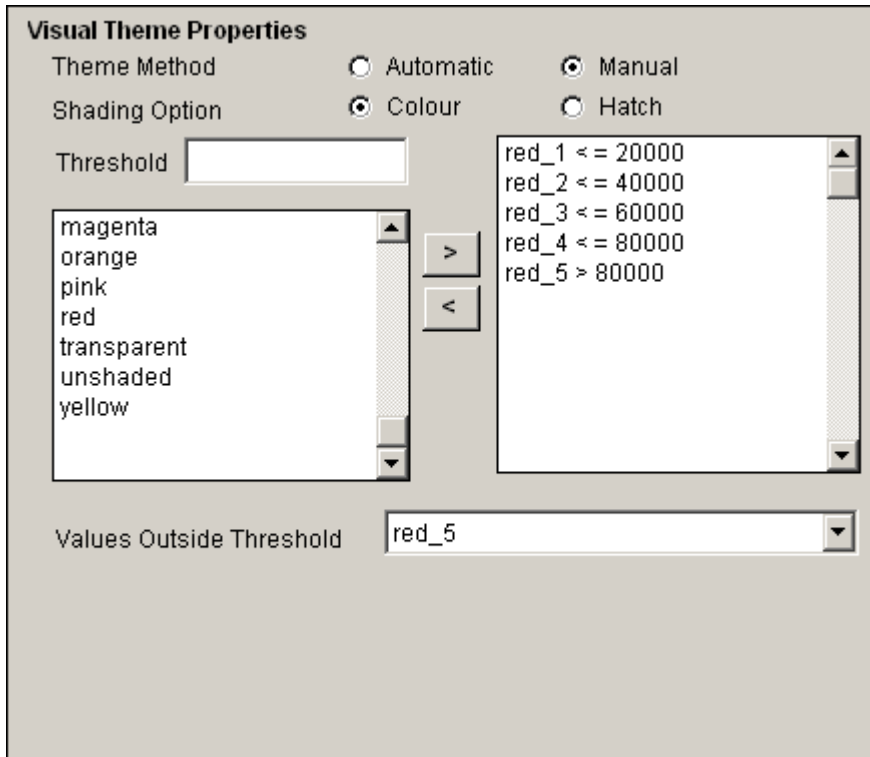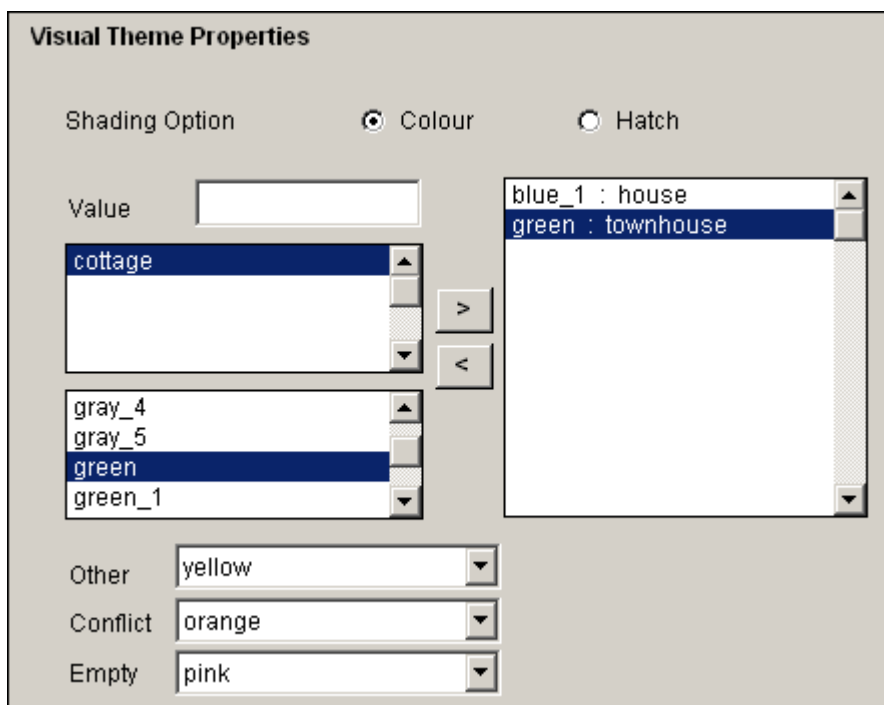

Fig 47. Threshold Properties section for string aggregations.

Map Intelligence includes an **'unshaded color'**. If this color is chosen for Relationship layers with radius properties hidden circles are removed completely so that they do not appear on the map, nor can they be exported. Hidden circles do not have popup information.

For a Region Relationship layer or an Area Group layer, the 'unshaded color' is used for regions that should be left as they would appear without that layer. For example a country on a map that should not be colored by an Area Group layer would be left unshaded.

If the **'transparent color'** is applied to a Relationship layer with a radius property, it causes the 'transparent' circles to be displayed as see-through on the map, except for a surrounding border. It will display popup information. The 'transparent option' applied to a Region Relationship layer or Area Group layer makes the regions on the map transparent so that the underlying areas can still be seen. This can be used for suburbs or small regions of a map which would not usually be visible on the map.

☞ Null values are ignored on aggregations so an empty area may contain points or rows with null values. For instructions on how to display null values, refer to the Displaying Null Values section at the end of this Section.

DISPLAYING NULL VALUES

Null values are ignored on aggregations so an empty area may contain points or rows with null values. If you want to view null values or include them in a Map Intelligence layer, follow the instructions below:

1. Move to a Table Results section that contains the null values.

2. Right mouse click and choose **Add Computed Item**.

3. In the **Computed Item** window, type a Name (e.g. Null Values) and the following definition:

```
if (Column_Name == null) {"Empty"}
```

```
else {Column_Name}
```

☞ 'Column_Name' is the column that contains null values.

☞ If you want to use this column for a numeric aggregation, replace 'empty' with '0'.

☞ Note that the format of numbers in a column must be pure numbers. They should not include any symbols for example, '**%**', but can have decimal places.

4. Click the **OK** button to save the definition and to add a new column to the table.

In the **QIQ Area Group Configuration** screen:

1. Select a Relationship or Area Group Layer from the drop-down list. This should automatically fill in following fields:

Area Properties

Layer Name

Min Zoom and Max Zoom

Table

Table Name

Table ID Column

Fact Column

Map

Reference Region Layer

Region ID Column

2. Under the **Fact Column**, select the new computed item you just created to identify the null values. In this example, the column is called Null Values. Select Null Values from the drop-down list.

3. In the **Data Properties** box, choose the **Data Type**, either Numeric or String, and an **Aggregation Function**, e.g. MOST COMMON.

4. Decide on the **Shading Option**, display as either a color or a hatch.

5. For string aggregation, make sure that the **Other**, **Conflict** and **Empty** fields are filled in from the drop-down selections, otherwise a prompt will ask for their values.

6. Click the **Apply** button.

7. Select a dashboard frame from the available **Sections**.

8. Click the **Map Intelligence** button in the dashboard to open the map viewer.

☞ Note: Ensure that the layer you chose in the QIQ Area Group Configuration screen is visible on the map in the map viewer. If not, go to Controls > Relationship Layers. Click the Show Controls button and apply the layer as visible.

9. The map in the map viewer will show the data with null values as specified from the dashboard frame.\
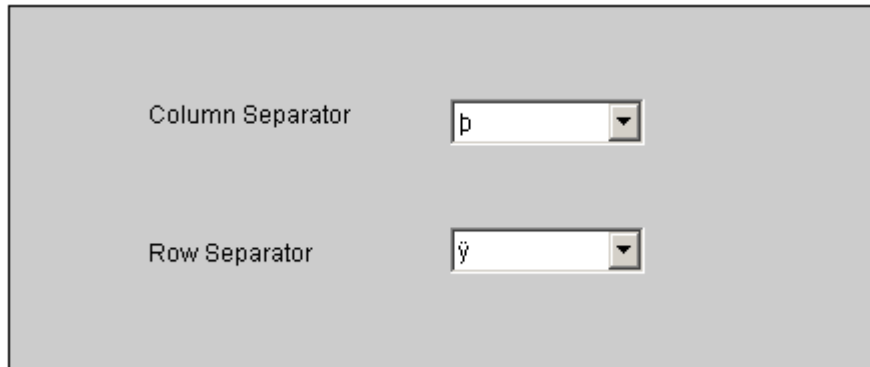
CONFIGURE LAYERS FOR SELECTIONS

The **Selection** tool allows users to select points from the map or regions of built in maps and bring them back to the dashboard as filters. The **QIQ Retrieval Configuration** frame can be used to configure the specific columns from the Point or Region layer that will be available for selection.

☞ The Selection toolkit must be installed on your machine for the selected data to be returned to the dashboard. Please see the Client Installation Guide on the Map Intelligence CD for more information.

☞ The Selection tool uses delimiters to separate characters when it is being sent back to the BQY. The default separators are shown in the fig below. If these characters appear in your selected data, you will need to configure new delimiters. You can configure your delimiters by going to View > Unhide Section and selecting the QIQ Comms Configuration section.

Fig 48. Delimiter characters for Columns and Rows.

10. Select **QIQ Retrieval Configuration** frame from the **Navigation** drop-down menu, at the top left of the screen.
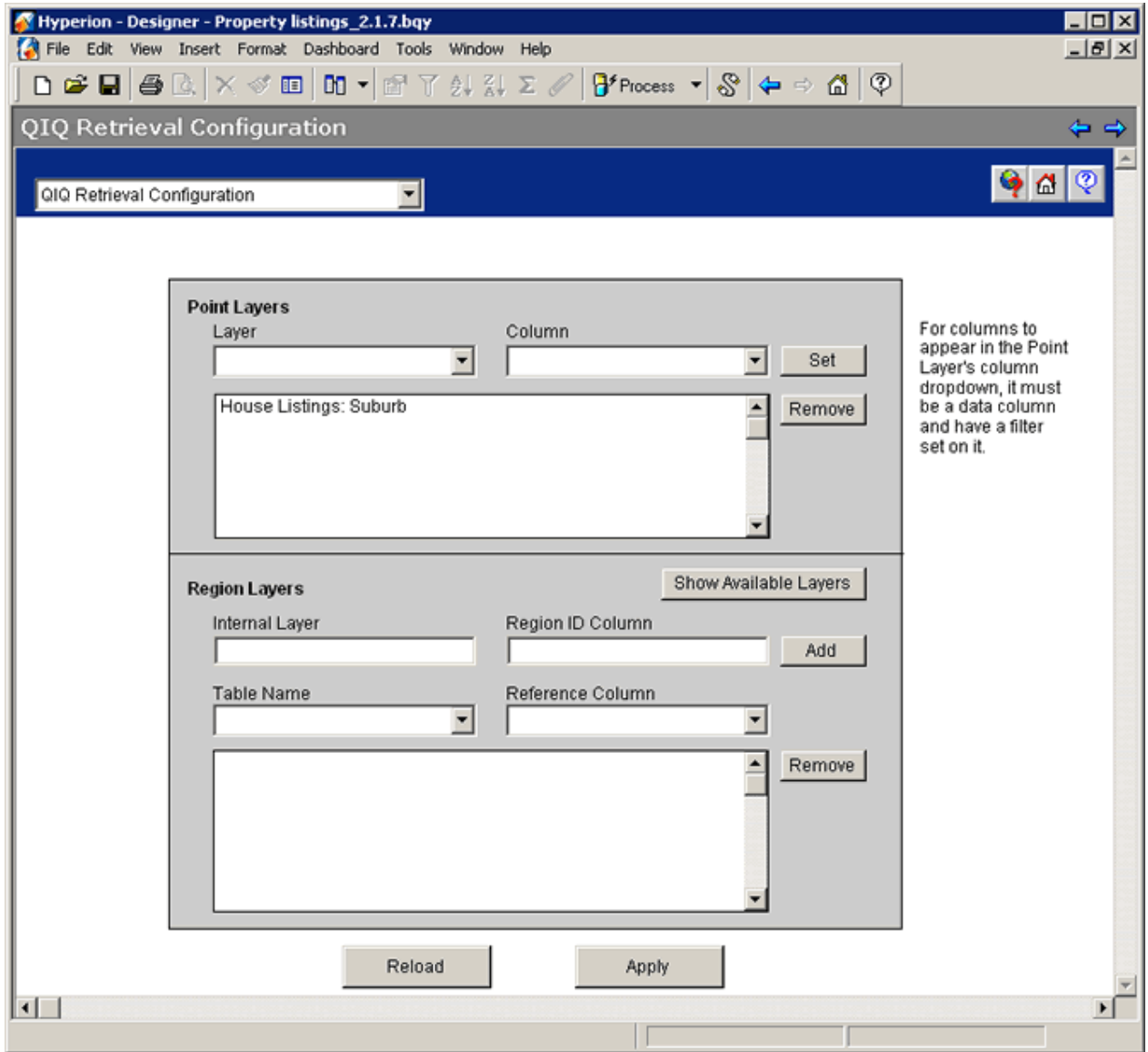
Fig 49. QIQ Retrieval Configuration frame.
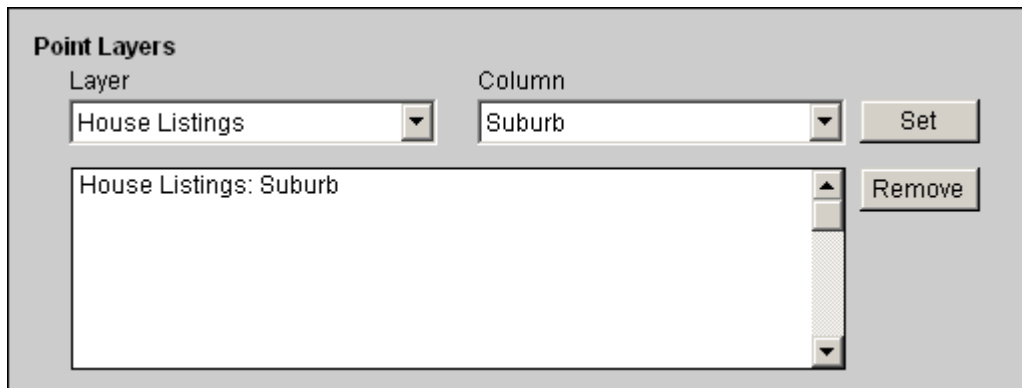
POINT LAYERS

1. The **Layer** drop-down list will list all Point layers in the dashboard. Select a layer from the drop-down list.

    The **Column** drop-down list contains a list of all valid columns. A valid column is a **limit** column with no number formatting applied to it, that has been specified as a Data Column in the Point Layer Configuration Screen.

2. From the **Column** drop-down list, select a column then click the **Set** button. The selected layer name and the selected column will appear in the panel below. Columns in this panel will be brought back as filters in the dashboard when a selection request is made for the selected layer. To remove the settings click the **Remove** button.

☞ If the column you have added contains a number or date format a warning message will appear.

Fig 50. Selected columns for House Listings layer.

3. Click the **Apply** button.

☞ Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

REGION LAYERS

1. In the **Internal Layer** field, enter the built-in map layer.

☞ Click the **Show Available Layers** button to get a list of the built-in map layers for the selected map. The **Map Intelligence Query Tool** page will appear. Select your map file from the **Choose Map** drop-down list and select a map layer from the Choose Layer drop-down list.

2. In the **Region ID Column** field, specify the built in map layer column that contains the regions you wish to select.

3. From the **Table Name** drop-down list select the Results / Table section that contains the column you wish to filter.

4. From the **Reference Column** drop-down list select the column you wish to filter. The values in this column should match the values in the Region ID Column.

> The **Reference Column** drop-down list contains a list of all valid columns. A valid column is a **limit** column with no number formatting applied to it. Data from the Region ID column is used to set limits in the Reference column, therefore the data must match exactly, including the case and white spaces.
> Internal layers and the Region ID column are case sensitive. You can check the case by clicking the Show Available Layers button and viewing the layer.

☞ Valid limit columns can be set in the QIQFilter properties section of the dashboard – please refer to the Hyperion Dashboard Builder User Manual for full information.

☞ The panel below the drop-down lists will show the region selection configuration in the following order:

Internal Layer: Region ID Column: Table Name: Reference Column

5. Click the **Add** button, the settings will appear in the panel below. To remove the settings, click the **Remove** button.
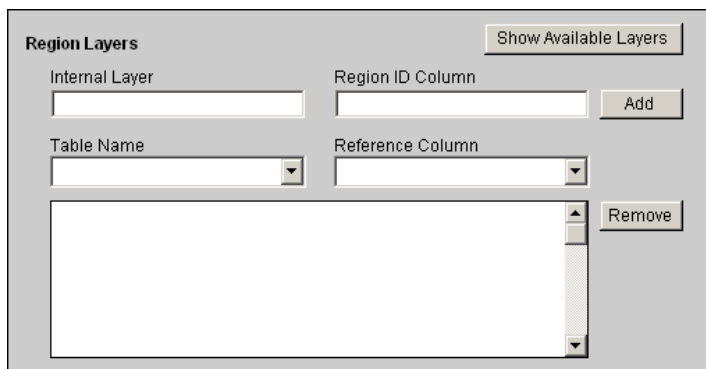
Fig 51. Selected columns for House Listings layer.

6. Click the **Apply** button.

☞ Clicking the Apply button only applies the specified settings. It does not save the underlying BQY. Users should save the BQY regularly to avoid loss of data.

CONFIGURE LAYER ASSOCIATION

The Layer Association Configuration screen lets you to associate particular layers with particular sections of your dashboard. When displaying the map from a particular section only the layers associated with that section will be displayed. This allows you to display layers with information relevant to that section and will take less processing time.
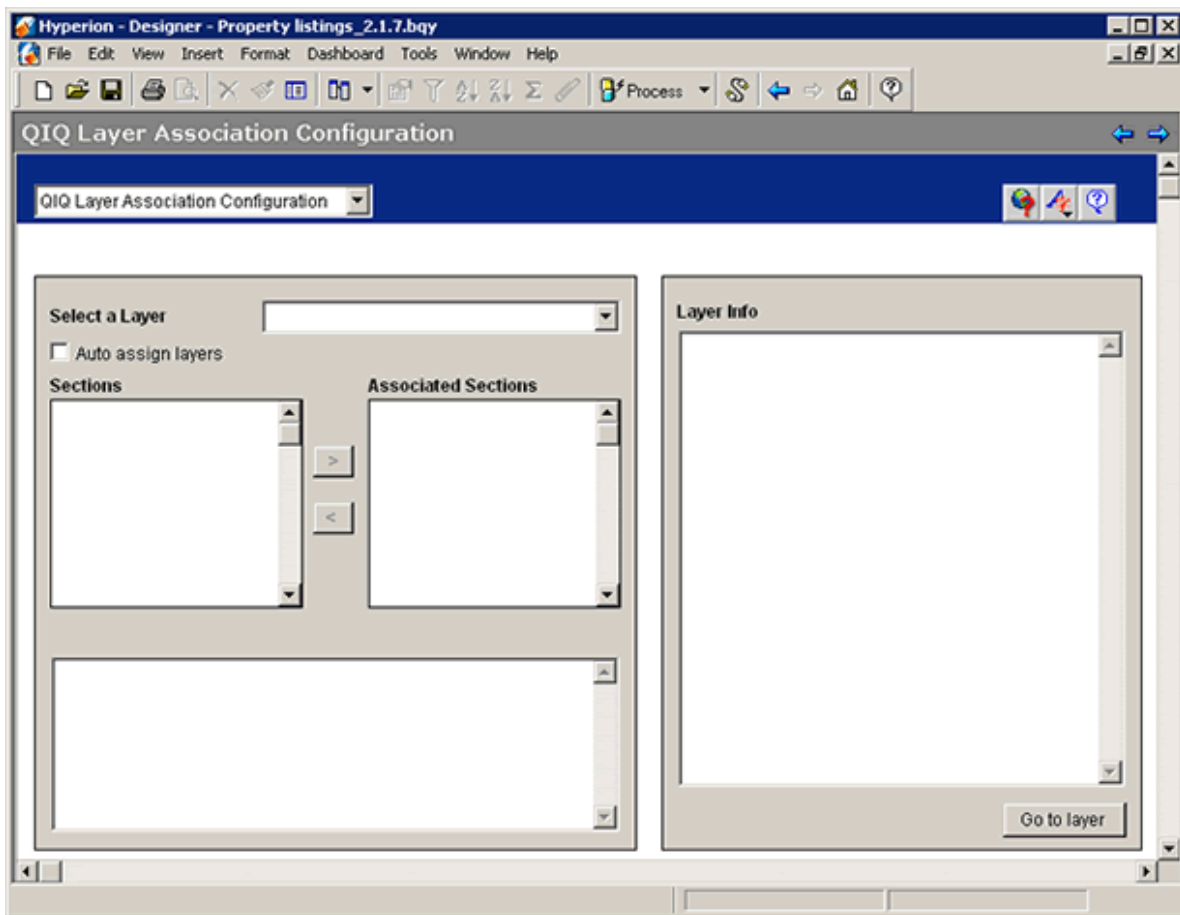
Fig 52. QIQ Layer Association Configuration Frame

1. Select the **QIQ Layer Association Configuration** frame from the **Navigation** drop-down menu at the top left of the screen.

2. From the **Select a Layer** drop-down list, select the layer you wish to associate sections with.

   Information about the layer is displayed in the **Layer Info** panel to the right of the screen. You can view the layer configuration screen by clicking on the **Go to layer** button.

   By default, Map Intelligence auto associates all available sections with the layer. These associated sections are listed in the **Associated Sections** list.

3. To disassociate a layer from a section, the **Auto associate layers** check box should be unchecked, then in the **Associated Sections** list box, select the sections(s) you wish to disassociate with the layer and click the **left arrow** button ![<]. The section will now appear in the **Sections** list and will not be associated with the layer.

4. To associate a layer with a section, the **Auto associated layers** check box should be unchecked, then in the **Sections** list box, select the section(s) you wish to associate with the layer and click the **right arrow** button ![>]. The section will now appear in the **Associated Sections** list box.

   ☞ Multiple selections can be made from either list by using the Control or Shift keys.

   When a section has been selected in either the **Sections** or **Associated Sections** lists, the information panel below the lists displays the selected section name(s) and the layers associated with the section.

In the example below taken from a Property House Sales dashboard, the dashboard section **Average Price by Year and Postcode** did not include any data regarding the Selling Agents, therefore the Map Intelligence layer **Agents** has not been associated with this section. When the map is viewed from the **Average Price by Year and Postcode** section the points indicating the location of the Agents offices will not be displayed.
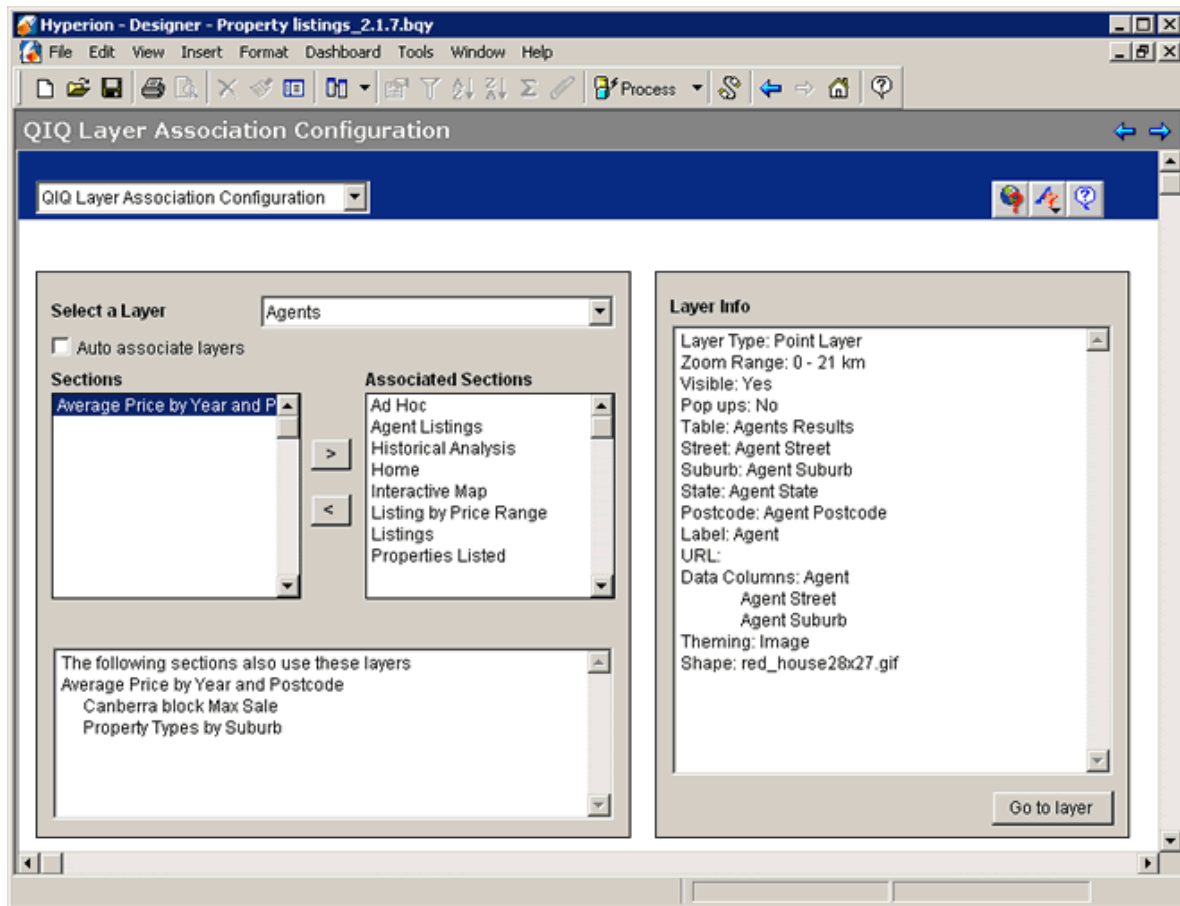
Fig 53. QIQ Layer Association Configuration Frame showing associated layers.

ADVANCED TOPICS

See separate appendix document.

Basic Encoding Set (contained in lib/rt.jar) Supported by java.nio, java.io and java.lang APIs

Canonical Name for java.nio API	Canonical Name for java.io and java.lang API	Description
US-ASCII	ASCII	American Standard Code for Information Interchange
windows-1250	Cp1250	Windows Eastern European
windows-1251	Cp1251	Windows Cyrillic
windows-1252	Cp1252	Windows Latin-1
windows-1253	Cp1253	Windows Greek
windows-1254	Cp1254	Windows Turkish
windows-1257	Cp1257	Windows Baltic
ISO-8859-1	ISO8859_1	ISO 8859-1, Latin Alphabet No. 1
ISO-8859-2	ISO8859_2	Latin Alphabet No. 2
ISO-8859-4	ISO8859_4	Latin Alphabet No. 4
ISO-8859-5	ISO8859_5	Latin/Cyrillic Alphabet
ISO-8859-7	ISO8859_7	Latin/Greek Alphabet
ISO-8859-9	ISO8859_9	Latin Alphabet No. 5
ISO-8859-13	ISO8859_13	Latin Alphabet No. 7
ISO-8859-15	ISO8859_15	Latin Alphabet No. 9
KOI8-R	KOI8_R	KOI8-R, Russian
UTF-8	UTF8	Eight-bit UCS Transformation Format
UTF-16	UTF-16	Sixteen-bit UCS Transformation Format,byte order identified by an optional byte order mark
UTF-16BE	UnicodeBigUnmarked	Sixteen-bit Unicode Transformation Format, big-endian byte order
UTF-16LE	UnicodeLittleUnmarked	Sixteen-bit Unicode Transformation Format, little-endian byte order
Not Available	UnicodeBig	Sixteen-bit Unicode Transformation Format, big-endian byte order, with byte-order mark.
Not available	UnicodeLittle	Sixteen-bit Unicode Transformation Format, little-endian byte order, with byte order mark.

Extended Encoding Set (contained in lib/charsets.jar)
Supported by java.nio, java.io and java.lang APIs

Canonical Name for java.nio API	Canonical Name for java.io and java.lang API	Description
windows-1255	Cp1255	Windows Hebrew
windows-1256	Cp1256	Windows Arabic
windows-1258	Cp1258	Windows Vietnamese
ISO-8859-3	ISO8859_3	Latin Alphabet No. 3
ISO-8859-6	ISO8859_6	Latin/Arabic Alphabet
ISO-8859-8	ISO8859_8	Latin/Hebrew Alphabet
windows-31j	MS932	Windows Japanese
EUC-JP	EUC_JP	JISX 0201, 0208 and 0212, EUC encoding Japanese
x-EUC-JP-LINUX	EUC_JP_LINUX	JISX 0201, 0208 , EUC encoding Japanese
Shift_JIS	SJIS	Shift-JIS, Japanese
ISO-2022-JP	ISO2022JP	JIS X 0201, 0208, in ISO 2022 form, Japanese
x-mswin-936	MS936	Windows Simplified Chinese
GB18030	GB18030	Simplified Chinese, PRC standard
x-EUC-CN	EUC_CN	GB2312, EUC encoding, Simplified Chinese
GBK	GBK	GBK, Simplified Chinese
ISCII91	ISCII91	ISCII91 encoding of Indic scripts
x-windows-949	MS949	Windows Korean
EUC-KR	EUC_KR	KS C 5601, EUC encoding, Korean
ISO-2022-KR	ISO2022KR	ISO 2022 KR, Korean
x-windows-950	MS950	Windows Traditional Chinese
x-MS950-HKSCS	MS950_HKSCS	Windows Traditional Chinese with Hong Kong extensions
x-EUC-TW	EUC_TW	CNS11643 (Plane 1-3), EUC encoding, Traditional Chinese
Big5	Big5	Big5, Traditional Chinese
Big5-HKSCS	Big5_HKSCS	Big5 with Hong Kong extensions, Traditional Chinese
TIS-620	TIS620	TIS620, Thai

Extended Encoding Set (contained in lib/charsets.jar)
Supported by java.io and java.lang APIs

Canonical Name	Description
Big5_Solaris	Big5 with seven additional Hanzi ideograph character mappings for the Solaris zh_TW.BIG5 locale
Cp037	USA, Canada (Bilingual, French), Netherlands, Portugal, Brazil, Australia
Cp273	IBM Austria, Germany
Cp277	IBM Denmark, Norway
Cp278	IBM Finland, Sweden
Cp280	IBM Italy
Cp284	IBM Catalan/Spain, Spanish Latin America
Cp285	IBM United Kingdom, Ireland
Cp297	IBM France
Cp420	IBM Arabic
Cp424	IBM Hebrew
Cp437	MS-DOS United States, Australia, New Zealand, South Africa
Cp500	EBCDIC 500V1
Cp737	PC Greek
Cp775	PC Baltic
Cp838	IBM Thailand extended SBCS
Cp850	MS-DOS Latin-1
Cp852	MS-DOS Latin-2
Cp855	IBM Cyrillic
Cp856	IBM Hebrew
Cp857	IBM Turkish
Cp858	Variant of Cp850 with Euro character
Cp860	MS-DOS Portuguese
Cp861	MS-DOS Icelandic
Cp862	PC Hebrew
Cp863	MS-DOS Canadian French
Cp864	PC Arabic
Cp865	MS-DOS Nordic
Cp866	MS-DOS Russian
Cp868	MS-DOS Pakistan
Cp869	IBM Modern Greek
Cp870	IBM Multilingual Latin-2

Canonical Name	Description
Cp871	IBM Iceland
Cp874	IBM Thai
Cp875	IBM Greek
Cp918	IBM Pakistan (Urdu)
Cp921	IBM Latvia, Lithuania (AIX, DOS)
Cp922	IBM Estonia (AIX, DOS)
Cp930	Japanese Katakana-Kanji mixed with 4370 UDC, superset of 5026
Cp933	Korean Mixed with 1880 UDC, superset of 5029
Cp935	Simplified Chinese Host mixed with 1880 UDC, superset of 5031
Cp937	Traditional Chinese Host miexed with 6204 UDC, superset of 5033
Cp939	Japanese Latin Kanji mixed with 4370 UDC, superset of 5035
Cp942	IBM OS/2 Japanese, superset of Cp932
Cp942C	Variant of Cp942
Cp943	IBM OS/2 Japanese, superset of Cp932 and Shift-JIS
Cp943C	Variant of Cp943
Cp948	OS/2 Chinese (Taiwan) superset of 938
Cp949	PC Korean
Cp949C	Variant of Cp949
Cp950	PC Chinese (Hong Kong, Taiwan)
Cp964	AIX Chinese (Taiwan)
Cp970	AIX Korean
Cp1006	IBM AIX Pakistan (Urdu)
Cp1025	IBM Multilingual Cyrillic: Bulgaria, Bosnia, Herzegovinia, Macedonia (FYR)
Cp1026	IBM Latin-5, Turkey
Cp1046	IBM Arabic - Windows
Cp1047	Latin-1 character set for EBCDIC hosts
Cp1097	IBM Iran (Farsi)/Persian
Cp1098	IBM Iran (Farsi)/Persian (PC)
Cp1112	IBM Latvia, Lithuania
Cp1122	IBM Estonia
Cp1123	IBM Ukraine
Cp1124	IBM AIX Ukraine
Cp1140	Variant of Cp037 with Euro character
Cp1141	Variant of Cp273 with Euro character
Cp1142	Variant of Cp277 with Euro character

Canonical Name	Description
Cp1143	Variant of Cp278 with Euro character
Cp1144	Variant of Cp280 with Euro character
Cp1145	Variant of Cp284 with Euro character
Cp1146	Variant of Cp285 with Euro character
Cp1147	Variant of Cp297 with Euro character
Cp1148	Variant of Cp500 with Euro character
Cp1149	Variant of Cp871 with Euro character
Cp1381	IBM OS/2, DOS People's Republic of China (PRC)
Cp1383	IBM AIX People's Republic of China (PRC)
Cp33722	IBM-eucJP - Japanese (superset of 5050)
ISO2022_CN_CNS	CNS11643 in ISO 2022 CN form, Traditional Chinese (conversion from Unicode only)
ISO2022_CN_GB	GB2312 in ISO 2022 CN form, Simplified Chinese (conversion from Unicode only)
JISAutoDetect	Detects and converts from Shift-JIS, EUC-JP, ISO 2022 JP (conversion to Unicode only)
MS874	Windows Thai
MacArabic	Macintosh Arabic
MacCentralEurope	Macintosh Latin-2
MacCroatian	Macintosh Croatian
MacCyrillic	Macintosh Cyrillic
MacDingbat	Macintosh Dingbat
MacGreek	Macintosh Greek
MacHebrew	Macintosh Hebrew
MacIceland	Macintosh Iceland
MacRoman	Macintosh Roman
MacRomania	Macintosh Romania
MacSymbol	Macintosh Symbol
MacThai	Macintosh Thai
MacTurkish	Macintosh Turkish
MacUkraine	Macintosh Ukraine

Area Group Layer

Area Group layers correspond to existing areas on a map. The displayed theme is based on data attribute values, no spatial calculation is required. Instead, a column in your business data is designated to have values that match a column in the map data. For example, an existing map layer of suburbs may correspond to a data column for suburbs where the values are the suburb names. Then, for transaction data that represents customer complaints and that also contains a suburb column, it is possible to make a cross-reference between the transaction and the map area using the suburb name. An example that would use this correlation is displaying a theme on a suburb's area on the map that reflects the most common complaint type received from that suburb.

BQY

A BQY is a Hyperion Intelligence (formerly Brio) document.

Built-in Layer

A built-in layer is defined by the map on the mapping server rather than the Map Intelligence Dashboard Client. These layers may contain all types of feature such as lines, points and regions e.g. cities, rivers and parks.

Component

A component is one or more Hyperion Intelligence sections that can be combined using the Merge feature of Hyperion Intelligence Dashboard Builder to produce reusable templates that offer a variety of capabilities and features. Map Intelligence is an example of a component.

Coordinate Systems

A coordinate system provides a frame of reference for measuring locations on the surface of the earth. A full list of acceptable coordinate systems is available in the Coordinate Systems document found on the Map Intelligence CD.

Dashboard

A dashboard is a collection of metrics and indicators, which together provide an interactive overview or a snapshot of your business.

Data Columns

Data Columns are columns in a result set that are sent to the Map Intelligence Server and have their values available in the Mapping Viewer. Data column values are displayed in the map data screen and popups that appear when you move your mouse over a point in the map. Data columns can also be used as fact or theme columns.

Ellipsoid

An ellipsoid is a mathematical shape that approximates the size and shape of the earth and is created by rotating an ellipse about its minor axis. The earth is flattened slightly at the poles due to its rotation and an ellipse best represents this shape.

ESM

An ESM (Editable Source Master) dashboard has all the code and structures required by the Wizard at build time and by the dashboard at run time. ESMs can be opened, modified and enhanced by the Wizard.

Fact Columns

A fact column is a data column that can have a string or numeric aggregation applied to it by a Relationship layer.

Fact Point Layer

A fact point layer is a Point layer that you wish to apply an aggregation function to. The points in this layer will be measured and the result will be compared against the threshold, specifying the color to assign to the circle or region.

Frame Templates

A frame template is the basis from which frames are created in Hyperion Intelligence Dashboard Builder. A Hyperion Intelligence Dashboard Builder Template can contain many different frame templates.

Hatching

Hatching is overlaying a pattern on top of a polygon allowing it to be distinguished visually rather than by using color.

Hyperion Intelligence Dashboard Builder

Hyperion Intelligence Dashboard Builder is a wizard-driven application builder that lets you develop dashboards without any programming, drastically reducing development and maintenance time. Hyperion Intelligence Dashboard Builder lets you create dynamic digital dashboards that provide real time and scheduled access to key performance indicators, operational analysis, and strategic management reports in an easy-to-use web format.

Hyperion Intelligence Dashboard Builder Template

A Hyperion Intelligence Dashboard Builder Template is the starting point for the development of a dashboard using Hyperion Intelligence Dashboard Builder.

Icons

Icons are used to visually represent points on a map. Icons can be symbols (image files) selected by the user or colored shapes that reflect the bars of a chart in the dashboard.

Images (See *Icons*)

Layers

A layer is a set of spatial features displayed on a map. Objects in a layer are usually grouped logically e.g. capital cities or parks. Each feature in a layer has the same set of data attributes, so a layer is in many ways like a relation (table) in a relational database.

Map Intelligence Dashboard Client

A Map Intelligence Dashboard Client is a BQY that allows configuration of Map Intelligence layers and has the ability to launch and interact with the Mapping Viewer.

Map Intelligence Layer

A Map Intelligence Layer is a layer defined in the Map Intelligence Dashboard Client. These layers display data in a result set as geographic features on a map.

Map Intelligence Server

The Map Intelligence Server is the engine that takes requests from the Map Intelligence Dashboard Client and Mapping Viewer and responds by displaying maps and associated information.

Mapping Viewer

The Mapping Viewer displays the layers configured by the Dashboard Designer on the specified map. The Mapping Viewer is launched in a browser and provides controls that allow the end user to manipulate the map to return the desired analysis.

Point

A point is a geographic feature with a single pair of coordinates. These are used to represent objects or events e.g. house or accident locations.

Point Layer

Point layers are map layers where data is represented on the map as discrete point images or symbols. For example: a particular layer might represent the location of stores as push-pin icons and another layer could represent accidents as colored dots, where the color (theme) represents the severity of the accident. Typically, the rows in a table of data belong to a business concept such as people or address details, where each column is an attribute of that concept. Thus each row in your business data can be represented as an individual point in a point layer. In Map Intelligence, point layers form the foundation for relationship layers.

Radius Relationship Layer

Radius relationship layers are circular regions with themes around certain points of interest that show information about other points that fall within that circular region. These layers are generated by Map Intelligence. They are based on calculations made by Map Intelligence on the specified data values as specified by the layer designer. For example: different colored circles indicate the average house price within half a kilometer of a proposed waste plant. Another example is where different colored circles indicate the number of burglaries that have occurred within a five-mile distance of houses belonging to known burglars. In the current version of Map Intelligence, the circle center points (eg: houses belonging to known burglars) and the data being analyzed (burglaries), must be point layers.

Regional Relationship Layer

A Region Relationship layer corresponds to a map area of any shape that is solely geographical in its definition and not generated by Map Intelligence. Examples would be suburbs, zip codes, local government areas or police precincts. Region Relationship layers can be given themes according to specified data rules associated with the points that fall within that region. An example of such a theme could be color-coding precincts according to the number of crimes that have taken place within their boundaries, or applying different hatches to suburbs based on the total value of house sales that have occurred in each one. Map Intelligence works out in which region a point (eg: a sale or accident) physically belongs by doing a spatial calculation.

Relationship Layer

For further information see: Radius Relationship Layers and Regional Relationship Layers

Results Set

A Results Set is a Results or Table section in a BQY that contains data available to a Map Intelligence layer.

Theme

A theme can be described as a representation of map features according to different associated values.

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