

SPECTRUM SPATIAL FOR BI (MAP INTELLIGENCE SP) 4.1 README

Please take a moment to read this document as it contains late-breaking information that will help get you up and running quickly with Map Intelligence SP. This Readme file relates to version 4.1 of Map Intelligence.

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IMPORTANT NOTES

- **Radius Relationship Layers:** This layer type is not currently available in this version of Map Intelligence for Spectrum, however Region Relationship layers are now available, see [What's New in this Release?](#) Section.
- **Licensing:** When updating license certificates, ensure that you stop the server, remove the old "lc" certificate files then re-start the server and install the new licenses.

END OF CONTRACT SERVICE LIFE

Pitney Bowes has an "End of Contract Service Life (EOCSL) Period". The following version information refers to the products End of Life (EOL) by month and year e.g. 7/04 where the last day of the month is the EOL date for a product e.g. 31 July 2004. Each release from Pitney Bowes identifies the releases(s) which is superseded and the EOL date of those superseded releases. The EOCSL date is 3 years from the EOL date.

MI Server SP version 4.1

- Release Date: Jan 2015

This version supersedes the following version(s):

MI Server SP version 4.0

- Release Date: May 2014
- EOL Date: Jan 2015
- EOCSL Date: Jan 2018

PREREQUISITES

Requirements for Map Intelligence SP installation:

- Operating System as per the compatibility table, see [Compatibility](#).
- Browser as per [Compatibility](#).
- Confirm that a Java Development Kit (JDK) is installed. JDK version to use as per the compatibility table, see [Compatibility](#).

You can download and install the latest JDK from Oracle's Java site.

<http://java.sun.com/javase/downloads/index.jsp>

- At least 1024 Mb physical RAM allowance for Map Intelligence.
- Approximately 500 Mb is required for installed files.

In addition, you will need to make a prudent allowance for log files. Map Intelligence log files are located in "\$Mi_HOME/tomcat/webapps/mapIntelligence/WEB-INF/logs" and are named 'mapIntelligence-trace.log' and 'mapIntelligence-trace.log.1'. The log file size will depend on the rate of usage, the level of tracing, and how often these files are archived or purged. By default, Map Intelligence limits the size of each log file to approximately 10Mb. When this limit is reached the file is copied to "mapIntelligence-trace.log.1" potentially overwriting the old contents and a new 'mapIntelligence-trace.log' file is created and used.

Also, with layer and feature caching the amount of disk space is variable and will depend on the number of layers and features accessed. It is advised that the System Administrator should monitor the size of the 'jcs' folder under the \$MI_WEBAPP location.

- The Map Intelligence Data Provider jar, must be installed into the Spectrum Server before Map Intelligence SP can work with Spectrum. This jar must be copied into the 'lib' directory within the spatial module. The path will be **server/modules/spatial/lib** within the Spectrum installation. The Data Provider jar can be found in Map Intelligence software package.
- Make sure that the following Pitney Bowes products are already installed: Spectrum Spatial version 9. If you wish to geocode you should have the Spectrum Geocoding Module installed or another suitable geocoder.
- Using MapInfo Professional, ensure your default map is correctly prepared by creating an appropriately designed .mws file (map) that has all default map layers you require (turned off) and ensure it uses the projection EPSG: 3857.

Load the .mws file directly into Spectrum via the add **Named Map** feature in the Management Console and overwrite named tables. Note: After load, select modify on your map to ensure the tables have a green tick box and have loaded successfully.

- Important Note after finishing Installation. For Spectrum Spatial version 9, it is necessary to ensure that the setting **Ignore Case for Area Groups** is set to false.

From the **Map Intelligence Tools page**, click the **Settings** button on the Map Intelligence Tools page. A login page will appear, enter the **Administrator username** and **Administrator password** entered in the Administrator credentials dialog during installation. Scroll down to the **Ignore Case for Area Groups** and set to **False**.

- Please also read the [Map Intelligence SP Installation Guide](#) including the section “Before Beginning the Installation”.

COMPATIBILITY

MI Server SP 4.1 has been tested with the following Map Intelligence, third party components and tools:

Component	Version	Comment
Map Intelligence Clients		
MI Clients for Actuate, BIRT, Business Objects, Cognos, Microsoft SQL Reporting Services, MicroStrategy, OBIEE and QlikView	3.2 and later	
MI Hyperion Client	2.2.10	
MI Excel Client	3.0.1, 3.0.1.1, 3.1, 3.1.0.1, 4, 4.0.1, 4.1.0.1, 4.1.0.3	
Operating System		
Microsoft Windows	7, 8 and updates	
Windows Server	2008, 2012 and updates	
Fedora	Up to 20	
Ubuntu	8.0.4, 8.1.0, 9.0.4, 9.1.0, 10.0.4	
Solaris	10	
Java VM		
Java Development Kit (JDK)	JDK 8	Compatible with: JDK 8 (1.8.0_25)
GIS Provider		
Spectrum Spatial	9	
Geocoding Provider		
MapMarker AUS (with MapMarker 3.0.0)	9.5, 10.5, 11	
MapMarkerJServer-USA (with MapMarker 3.0.0)	11	
Google Geocoding Service	v3 API	
Pitney Bowes Spectrum	v7 to v9	
WIGeoGIS	v 4.2	
Database Layers		
Microsoft Access 2000	9.0.3821 SR-1	
Microsoft SQL Server	2000, 2008	Tested with MS SQL Server 2000, but should work with more recent releases.
Oracle	8, 9, 10	Tested with an Oracle 8 database but newer versions should be fine.
Browsers		
Internet Explorer	8, 9, 10, 11	
Firefox	Up to 33.1	
Google Chrome	Up to 38.0	
Android Tablet	Fennec version 26 Google Chrome 38	Tested using ASUS Memo Pad 10" running 4.2.2

UPGRADING FROM THE 4.0 RELEASE

Please note that the upgrade process does **not** copy third party libraries such as JDBC driver jars that have been put into the WEBINF\lib directory. **These must be copied manually.**

The following information describes how specific settings can be restored with the new Map Intelligence installation.

COLORS

If any new colors have been added to Map Intelligence, copy the files from

```
[old_installation]\tomcat\webapps\mapIntelligence\colors
```

to

```
[new_installation]\tomcat\webapps\mapIntelligence\colors
```

SYMBOLS

If any new symbols have been added to Map Intelligence, copy them from

```
[old_installation]\tomcat\webapps\mapIntelligence\symbols
```

to

```
[new_installation]\tomcat\webapps\mapIntelligence\symbols
```

BATCH SCHEDULES

If any schedules or data sources have been set for the batch geocoder, copy everything from

```
[old_installation]\tomcat\webapps\mapIntelligence\WEB-INF\properties\batch
```

to

```
[new_installation]\tomcat\webapps\mapIntelligence\WEB-INF\properties\batch
```

TEMPLATES

The installation will preserve the old values and properties in the previous templates directory.

The directory:

```
[old_installation]\tomcat\webapps\mapIntelligence\WEB-INF\templates
```

will replace the directory:

```
[new_installation]\tomcat\webapps\mapIntelligence\WEB-INF\templates
```

A directory:

```
[new_installation]\tomcat\webapps\mapIntelligence\WEB-INF\templates.NEW
```

will contain the templates for the this release.

If you want to use templates from the new installation instead of the old one (for example a new version of one of the viewer templates) then you will need to restore this to the templates directory from the templates.NEW directory.

PREFERENCES AND SETTINGS

Any changes made to the Map Intelligence default settings are stored in the file `user.preferences.properties`. Copy it from

`[old_installation]\tomcat\webapps\mapIntelligence\WEB-INF\properties`

to

`[new_installation]\tomcat\webapps\mapIntelligence\WEB-INF\properties`

- In addition, you (or your System Administrator) may have changed some properties. This version of the installer¹ DOES NOT copy these modified property values. Instead you have to manually reconcile the new and old properties by merging them. Here is the list of properties files that need to be checked:
 - `wms.properties`
 - `flexSocketProfileServer.properties`
 - `geocoder.xxx.properties`
 - `network.properties` - see [Network Settings](#) section on page 8 for more information.
 - `google-maps.properties`
 - `kml.properties`
 - `logConfig.xml`
 - `ogc.api.properties`
- Note about locations of properties when an install/upgrade style/type of installation is used.

The Map Intelligence installers offer you the option, during installation of ‘upgrading’ a previously installed version of the Map Intelligence Server. For more information about this option please see the *Map Intelligence Server Installation Guide*.

After an installation with the ‘update/upgrade’ option the final Map Intelligence Server location will have in the folder

`[new_installation]\tomcat\webapps\mapIntelligence\WEB-INF\properties`

two folders: ‘properties’ which will contain the ‘new’ properties and ‘properties-OLD’ which will contain the old property values. You would still need to manually merge the property values of the previously mentioned list.

NETWORK SETTINGS

In order to add support for HTTP Proxy types which use NTLM authentication, all the properties affecting this behavior are in a file named “`network.properties`”, found under the `.../Map Intelligence/WEB-INF/properties`”.

¹ In the future the installer may have better logic for handling the merging of those properties

IMPORTANT: When upgrading from a previous installation of a Map Intelligence Server, care must be taken to manually edit the new “network” properties to reflect pre-set values which are found in both the “mapsettings” and “user.preferences” older properties files.

For further information refer to [Technical Note: Map Intelligence Network Settings](#).

WHAT'S NEW IN THIS RELEASE?

The following major changes have occurred in version 4.1

MI VIEWER

MI CUSTOM LAYER TYPES

Region Relationship Layers

A new MI Custom Layer type is now available - Region Relationship Layers. 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 (egg: a sale or an accident) physically belongs to by doing a spatial calculation.

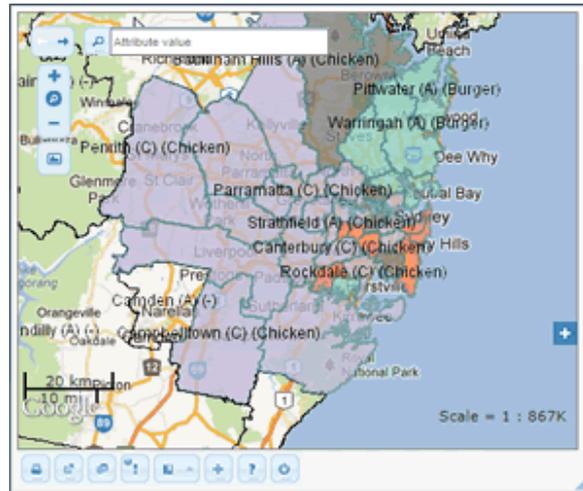


Figure 1: The MI Viewer displaying a Region Relationship layer. Local Government Areas of Sydney are color-coded according to the most common type of fast food outlets in each area. Purple areas show chicken outlets are the most common, green areas burger and red areas pizza.

- For further information on all layer types see the 'MI Custom Layer Types' section on page 9 of the [MI Viewer Manual](#).

NEW VISUALIZATION LAYERS

There are 3 new Visualization layers available in this release: Charts on Regions, Line Generator and Point Clusters

Charts on Regions

Charts on regions allows you to select a Region layer (i.e. a Region Relationship or Area Group layer) and automatically generate bar or pie charts, in 3D or flat look, displaying aggregations over the values of some attributes / columns of the associated point layer.

- For further information see 'Charts on Regions' on page 62 of the [MI Viewer Manual](#).

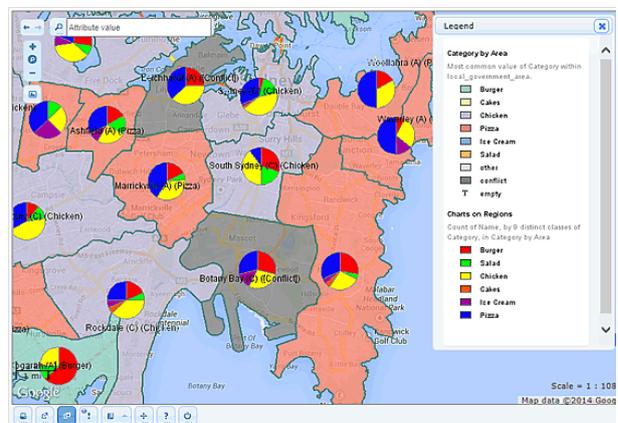


Figure 2: Charts on Regions: Flat Pie.

Line Generator

The Lines generator allows you to quickly create a visualization layer that draws lines between two associated sets of points and theme (or color-code) the line based on a selected value.

In this sales distribution example below the relationship between Dealers and the Sub-Dealers is displayed. A line has been drawn between a Dealer  and the Sub-Dealers , the dealer is responsible for. Each line has been color-coded or themed according to the Dealer, for example a yellow line represents Dealer "A Raines".

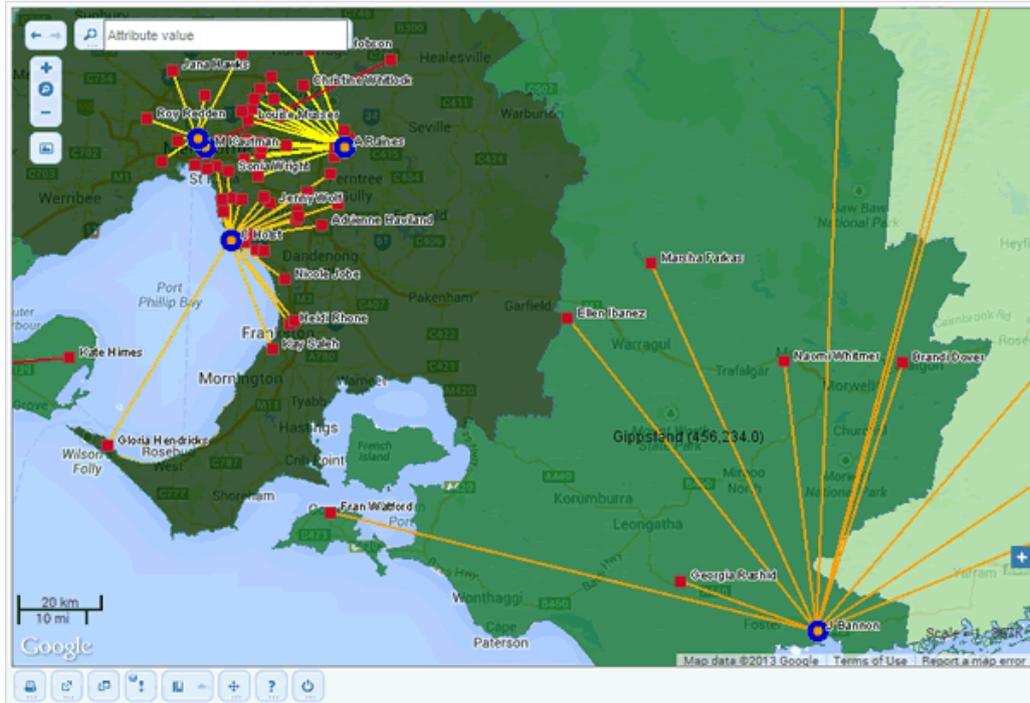


Figure 3: Lines generator displaying the relationship between Dealers and Sub-Dealers.

- For further information see 'Line Generator' on page 66 of the *MI Viewer Manual*.

Point Clusters

Information-rich maps are important for showing relationships and analyzing trends. However, when a map has too many points to communicate a clear meaning, the information needs to be simplified. Reducing the amount of points on the map can be accomplished by using Point clusters.

Clustering is the process of grouping closely positioned locations together and representing them with a 'cluster icon' i.e. a simple circular icon, with a radius proportional to the clusters size and showing the number of points within the cluster . When you zoom in, those locations will become further apart and will separate into their own cluster icons.

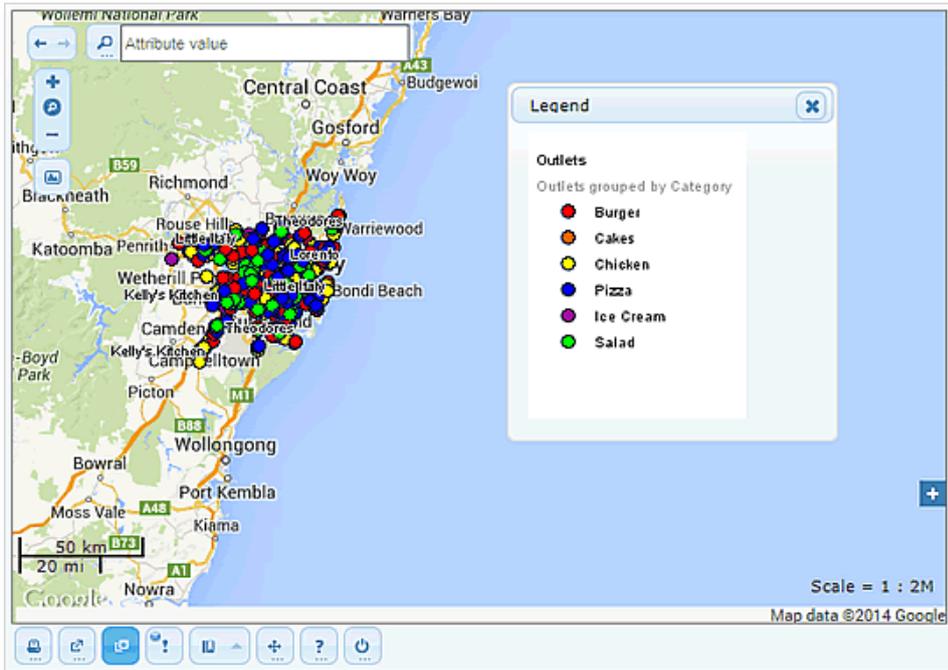


Figure 4: Example of how points can overlap and look cluttered making the map hard to read.

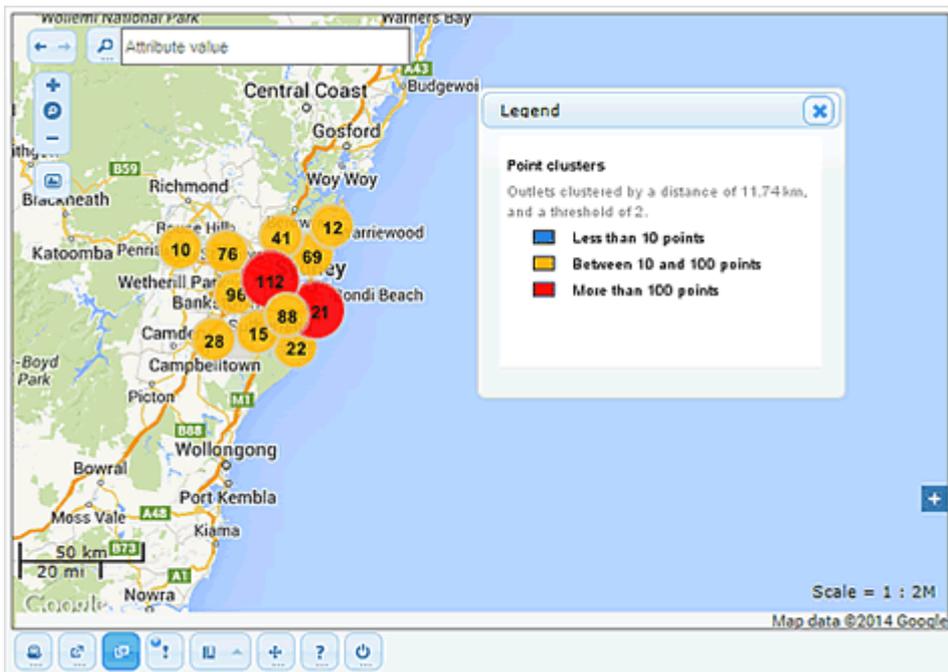


Figure 5: When using point clusters the map is simplified, the cluster icon indicates there are multiple points in that location.

- For further information see 'Point Clusters' on page 64 of the *MI Viewer Manual*.

Exporting Selections

The MI Viewer (MING) now has a new button on the selection panel to allow the exporting of the current User's selection buffer as a Microsoft Excel Workbook

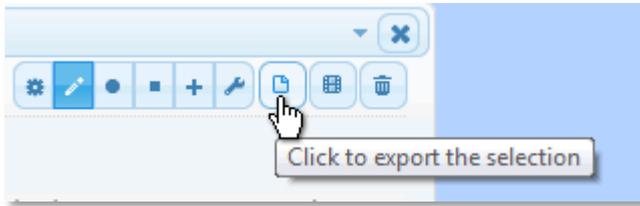


Figure 6: Export button.

- For further information about exporting selections, see page 39 of the *MI Viewer Manual*.

Internal (built-in) Layers

We now process visible internal (built-in) layers marked as Targets in the MI Viewer (MING) Selection tools and popups.

- For further information about Selection Mode see page 31 of the *MI Viewer Manual*.
- For further information about Popup Mode see page 42 of the *MI Viewer Manual*.

Query Results

A results set in the Selection panel, may display a column with a document icon , indicating further information about the feature is available, clicking the icon (Figure 7) will display the information in the Selection panel (Figure 8).



Figure 7: Click on the document icon to display further information about the feature.

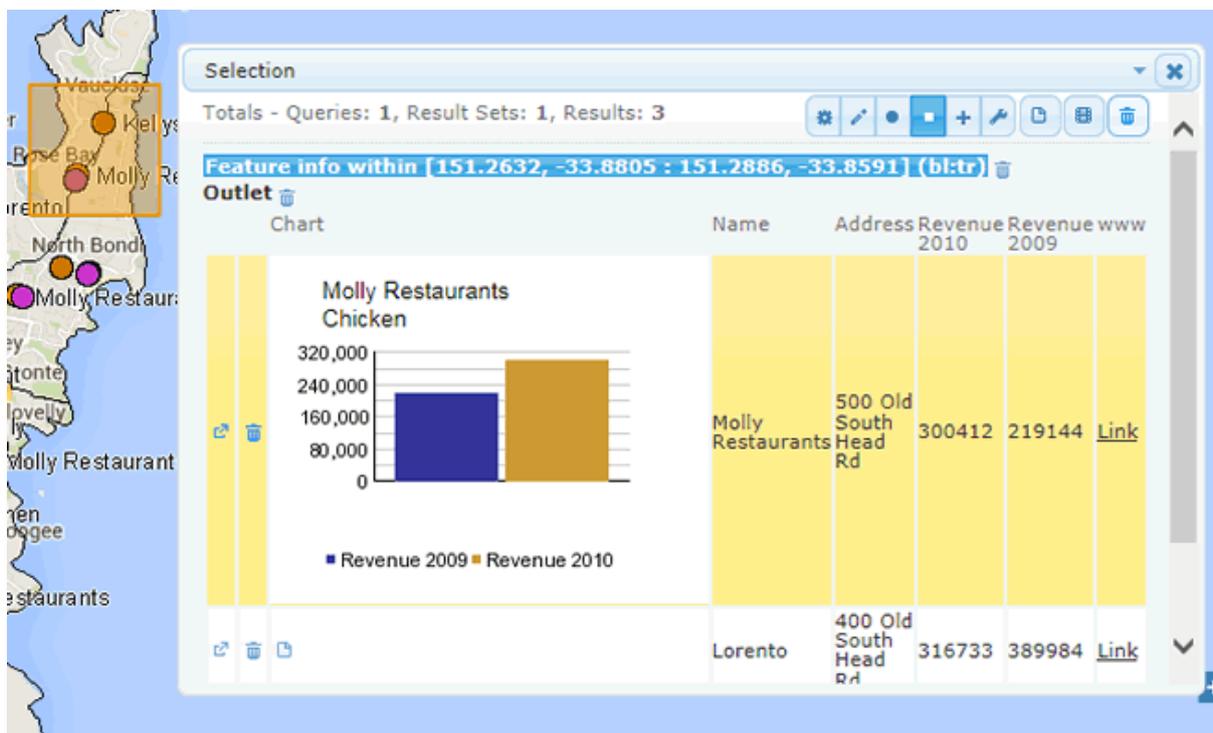


Figure 8 In this example, the additional information is a chart comparing revenue over two years.

- For further information see Query Results on pages 38 and 39 of the *MI Viewer Manual*.

All / None buttons

On the selection panel the All and None have been moved closer to their intended targets.

Selecting by Polygons

For the time being, when selecting by polygons, the bounding box of the drawn polygon is used for selecting regions of internal layers.

GENERAL

Quick Tips

In this release we now have partial German and Spanish translations of Quick Tips. Images still include English text but the HTML text is in either German or Spanish.

Quick Tips appear the first time you use the MI Viewer or Long-press the Help button and give a few quick tips on how to interact with Map Intelligence.

Messages

All English messages are now available in French.

- For further information about the 'Preferred Languages' see *Appendix A – Preferred Languages* (page 73) of the *MI Viewer Manual*.

CustomGUI.txt

The customGUIs.txt file contains the current user interfaces and their meanings. Some of the viewers in the list may not be included in particular installations (e.g. the Flex viewer). Viewers can be removed from the list by editing the CustomGUIs.txt (... \tomcat\webapps\mapIntelligence).

- For further information see Appendix D – MI Viewer on page 30 of the [MI Server Tools and Administration Guide](#).

Fetch Map Names from GIS Provider

This new setting can be found in the Settings section of the Map Intelligence Tools page. When the **Yes** radio button is selected, Map Intelligence will delegate to the concrete GIS Provider implementation the task of fetching the list of available map names.

- For further information on Settings see page 11 of the [MI Server Tools and Admin Guide](#).

New Property Files

Optimizing for maximum number of features (MI SP)

A new property now exists in **implementation.spectrum.properties** that specifies the maximum number of features to optimize for.

When a layer is specified to be optimized using the optimizeFeatures property, the value specified determines how many features it should consider retrieving before switching to the default behavior and retrieving all the features on the screen. For example, assume the limit is set to 50. If there are more than 50 features on the screen which have values associated with them, then all features on the current screen will be retrieved. Otherwise only the regions that have values associated with them will be retrieved from the Spectrum Server. those that are present or not commented out are shown. These properties must be set manually.

Point Clusters

The Point clusters plugin while exposing a minimal set of configuration properties (layer, distance and threshold) offers a way for the expert Server Administrator or programmer to control the classification and styling of cluster symbols.

It does that by relying on some properties expected to be found in the 'cluster.properties' properties file, found in mapIntelligence\WEB-INF\properties. The most important of these follow with their default values:

```
cluster.break.values=10,100,1000
cluster.symbol.sizes=20,30,40
cluster.symbol.colors=0x4169E1,0xFFB90F,0xFF0000
```

The first one allows specifying the class breaks, the second the symbol sizes (circle diameter) and the third the symbol fill colours. If values other than the defaults are to be used the following constraints are checked:

- all 3 lists must have the same number of elements;
- the minimum number of elements is 2; and
- the class break values must be positive, in ascending order with the lowest greater than or equal to 5.

if any of these conditions is violated the default values are used instead.

- For further information on Plugin Properties see Appendix B on page 24 of the [MI Server Tools and Admin Guide](#).

FIXED KNOWN ISSUES

The following known issues have been fixed in version 4.1

Issue: 1579: WMS Overlays 'Hide All' button does not work unless the tree widget is opened.

The 'Hide All' button in the WMS Overlays tree widget panel does not work unless / until the tree is opened, at least the first level nodes are visible.

Issue: 1578: WMS OverLays opacity slider setting

WMS overlays layers marked as visible by default show in the tree widget with their opacity slider set at 0% when it should be 100%.

Issue: 1575: Active Point Links – URL values should not contain spaces

In this version of the MI Server, it is recommended that Layer Designers ensure there are no spaces in the URL values used for Active Point Links.

NEW ISSUES WITH MI SERVER RELEASE 4.1

Issue 1656: Uniform Aggregation (MI SP)

In the current version of the M SP, the uniform aggregation is not supported for string based themes.

Issue 1641: Relationship Layer – Null values shown for Invalid or conflicting values.

Currently for relationship layers, the Spectrum Server performs the aggregation calculation. Spectrum has no concept of an invalid or conflicting value for a string aggregation and will return null in these cases. Therefore we get the same response for empty, invalid and conflict - null.

Stop Press: Known Issues

Late breaking known issues can be found by contacting Pitney Bowes Technical Support.

ISSUES AND CAVEATS CARRIED OVER FROM PREVIOUS MAP INTELLIGENCE SERVER RELEASES

The issues presented here are not considered of major concern to the product's performance and will be tackled in a future release.

Issue 1574: Internet Explorer 8 and MI Client Excel embedded map: Lines Generator Color picker

This issue only happens when using Internet Explorer 8 and the MI Client for Excel with an embedded map. When selecting Start and End line colors, the color picker fails to open correctly.

Issue 1561: Internet Explorer and MI Client Excel embedded map: Visualization layer configuration – empty attribute property setting.

This issue only happens when using the MI Client Excel and an embedded map. If you have created a visualization layer, if after sending a second request you view the visualization layer configuration, the second attribute layer property appears empty, clicking the down arrows however shows all the columns of the selected layer.

Issue 1491: Layer visibility problem with MI Client Excel while in development mode.

In Development mode, MI Clients allow the developer to create various Custom Layer with specific attributes related to Built-in layers in the map to use. For the Excel Client this ultimately leads to the creation for later re-use of a 'template' file. If Custom Layers are added in this process and the developer regularly 'tests' the process (by clicking the 'Show Map' button in this Client) the requests all use the same User ID. If the developer does not end the session before going back to the Excel Client and adding new layers, the visibility flags of some Custom Layers are not processed correctly. Specifically if a colour-based custom layer (i.e. Region Relationship or Area Group layer) is added, a test request is generated, the session is NOT ended, and another colour-based custom layer (i.e. Area Group or Region Relationship layer respectively) is added which uses the same built-in region layer as the previous layer, upon generating the new test request, both layers will appear to have their visibility flag turned on. In contrast when a clean session is started and even if the request states that both such custom layers are visible, the server correctly turns the visibility flag of one of them off and signals this to the user.

Issue 1383: Windows 7 and Licensing

On Windows 7 Pro (SP1), a JavaScript error may be thrown while installing licenses.

The next 3 issues only appear with some misbehaving MI Clients.

Issue 1385: GUI may signal a JavaScript error if the request references an in existent column

Issue 1375: Request processing is incomplete if it contains layers with unknown referenced (built-in) layers.

Issue 1376: Some MI Clients may send wrong column types with aggregation functions.

Issue 1267: MING - When Graticule layer is visible, Mark client events are not handled

In the MING viewer, after creating a Marker (right-click + select [Mark location]), clicking on the marker's icon should open a bubble with the reverse-geocoding information for the location. When the Graticule layer ([Graticule] option in the [User layers] accordion in the [Layout Manager] dialog) is visible, mouse click events are not handled correctly.

JDK7 on Windows

Sometimes, when using JDK7 on Windows, it may be necessary to move the 'jaxrpc-spi-1.1.3.jar' (and potentially 'jaxrpc-impl-1.1.3.jar') from MI webapp lib folder to the Tomcat's 'endorsed' folder replacing the 'jaxrpc-api-xxx.jar' there.

Issue 999: Settings page displays numbers incorrectly formatted in non-English locales

When setting decimal values in the settings page, the values are entered using the current locale's decimal separator, but the result of the change is shown with a "." decimal point.

Issue 998: Selection by region fails with remote map layers

If your map definition file contains remotely sourced layers (not on the local file system), selection by region may fail with a "Error retrieving the geometry of a region" message. The workaround is to use maps local to the file system.

Issue 951: Google Earth Export causes invisible layer to appear

If a layer is invisible due to the zoom level being out of its range then Google Earth is exported, the layer becomes visible in the MI Viewer and will not turn off. The only way to turn it off is to end the session.

Issue 939: Problem with Sun/Oracle JDBC-ODBC Bridge causes Batch Geocoder to fail

The JDBC-ODBC bridge does not recognize UTF-16 character, so the batch geocoder fails when geocoding addresses that have characters other than ASCII characters in them.

Issue 662: Incorrect start-up shell title

Due to the underlying component inter-dependencies, the DOS CMD-shell title bar is incorrect.

Issue 603: Issues when using Internet Explorer 8

NOTES:

1. You need to set IE8 as follows to ensure that pages get updated correctly: Tools -> Internet Options -> Browsing History -> Settings -> Temporary Internet files -> Check for newer versions of stored pages -> Every time I visit the web page
2. There is a known issue with IE8 and Excel when it is used as an embedded browser. The print dialog keeps appearing and must be cancelled when actions are carried out in the MI Viewer. Microsoft has released a hot fix for this in MS Office 2007. The ID of the hotfix is 978399 and it must be installed before this problem disappears. The hotfix requires that Service Pack 2 of Office 2007 be installed.

Issue 144: Contour Tool Limitations

Currently, the contour tool has two limitations that are sometimes noticeable:

It does not correctly handle closed contour lines with "holes" in them and this shows up as the same colour appearing in the hole and the surrounding area.

When the edges of contour lines cross the edges of the MI Viewer, it is sometimes possible that the contour polygons are colored the wrong way; i.e. the outsides of the polygons are filled rather than their interiors.

Important Note for the Batch Geocoder

The Batch Geocoder can make use of the PostgreSQL database and this database distinguishes between upper and lower case letters in names. You must ensure that your names are all the same case or the queries may fail. Other databases may have the same characteristics and users should check before using them.

Formatting of numeric data in columns

There is little control over the formatting of numeric data displayed in the MI Viewer. For example, Australian 4-digit postal codes are usually written without a "thousands" separator e.g. "2000". In Map Intelligence they will be displayed with a comma as the thousand separator e.g. "2,000". The workaround is to ensure in the client that they are in a string column rather than a numeric column. If necessary, add a new computed item column to convert them.

Java Date and Time

This is not specifically a Map Intelligence problem but will affect its operation. An issue exists with some Windows / Java combinations where Java is unaware of the time zone specified by Windows. To fix this: change the time zone to something else, then change it back to the correct time zone. Java should now use the correct time zone. This needs to be done when a JVM is installed on a machine for the first time.

Batch Geocoder Scheduling

When scheduling Batch Geocoder jobs, be careful not to use names that are identical except for letter case. Errors may occur if names differ only by capitalization.

Printing Region Data

When printing the data for a region layer, if two regions have the same label, only one will be printed.

Plugin Properties

The plugin.properties file contains the list of tools that can be enabled/disabled.

The forge.extent.history.marquee and the forge.extent.history plugins will cause errors in Map Intelligence if they are disabled.

Exporting Data

MapXtreme must be given sufficient memory to export the data. If export fails and the error is no map, then check the MapXtreme logs to see whether or not it was an out of memory error. If it was then increase the memory available to MapXtreme.

Line Layer Themes

Data used for adding themes to line layers cannot have whitespace at the beginning or end of the strings because MapXtreme will not accept them and the lines will not be given themes.

HOW TO CONTACT PITNEY BOWES

If you run into an issue, Pitney Bowes Software Technical Support can help guide you to a solution. When you contact Pitney Bowes Software Technical Support, please provide the following information:

- A description of the task you were performing
- The level or version of your operating system
- The patch level or service pack

Contact information for Technical Support can be found at:

www.g1.com/Support/Contact

DOCUMENTATION

Product documentation for Spectrum Spatial for Business Intelligence, including Map Intelligence and the clients are located here:

support.pb.com/spectrum

All documentation can be found under the Solution Guides section of the Product Documentation.