LayMan – Layer, Layout, Table and Workspace Management for your MapInfo Professional environment

LayMan version 3.00 is a major release. It is now a Microsoft .NET client application and an OLE client of MapInfo Professional. It is designed to facilitate navigation between windows and enhance the traditional window, table, map, layout and workspace functions within MapInfo. Attached to an edge of your MapInfo work area, LayMan responds dynamically to your normal MapInfo window interaction. Quick find functions allow selected rows to be located in the corresponding map or layout. Fully synchronised operation means that MapInfo and Layman focus and select operations show simultaneously. There have been major improvements to the user interface and the functions since the previous version. LayMan version 3 supports MapInfo Professional versions 5.5 to 8. It will most likely run without problems on earlier versions back to version 4.0 (the first version supporting Integrated Mapping – or OLE automation). Supported Windows platforms are all .NET supported platforms (xp/2k/nt/me/98). MapX is not supported in version 3. The previous versions support MapX.

See www.spatialprojects.htm/layman.htm for the most up-to-date information on the latest versions.

Summary of operation in MapInfo Professional.

<table>
<thead>
<tr>
<th>Invoke LayMan at the start of a session</th>
<th>MapInfo Professional maps, layouts and tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>MapInfo Professional</td>
<td><img src="image" alt="MapInfo Professional Interface" /></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="MapInfo Professional Map" /></td>
</tr>
<tr>
<td>LayMan – Layer and layout changes,</td>
<td><img src="image" alt="LayMan Interface" /></td>
</tr>
<tr>
<td>table display and edit, catalog lookup,</td>
<td></td>
</tr>
<tr>
<td>workspace select, run and correct.</td>
<td></td>
</tr>
<tr>
<td>Symbol catalog allows rapid selection</td>
<td></td>
</tr>
<tr>
<td>and assignment to your symbol layer.</td>
<td></td>
</tr>
</tbody>
</table>
**LayMan System Information**

- Setup package is about 6.2 Mb.
- LayMan must be installed on a user PC. There is not a network install option.
- You must uninstall a previous version of LayMan before running this installation. Existing version 3 and later preferences and registration will be retained.
- LayMan is an application written for the .NET framework. The Microsoft redistributable installer dotnetfx.exe must be run prior to LayMan install. The LayMan installer automatically prompts and initiates this installation if it hasn’t previously been run.
- MapInfo Professional versions 5.5 to 8.0 supported. Should function on earlier versions back to 4.0
- Run as a tool from the MapInfo tools menu. You should manually add LayMan.mbx to your tools menu.
- Windows operating systems: Win98, Win/NT, Win 2000, Windows XP.
- Initial disk space requirement: 10 Mb
- A preferences file accumulates accessed map information in the installation directory (which must be writeable).

**LayMan Pricing**

**Single CPU License.**

*US$ 49*

**Other Licenses**

*Details on application*
LayMan

Features and Benefits.

Here is a brief summary of the benefits you will see in using LayMan in conjunction with your standard MapInfo Professional user interface and applications.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interface</strong></td>
<td></td>
</tr>
<tr>
<td>Resides on any edge of your MapInfo work area. Drag the top of the LayMan window to your preferred size. Minimise to a button pad. Adjusts to MapInfo minimise, maximise, restore window states.</td>
<td>Improved productivity - Instant access to layer control, table, workspace and layout data. See and navigate to any of your MapInfo windows in a single click. Change display and edit properties with instant effect on your map or layout.</td>
</tr>
<tr>
<td>Runs alongside MapInfo and other applications.</td>
<td>Removes some restrictions on normal user operation - LayMan will co-exist with your other MapInfo applications and tools. Most features of the MapInfo interface are disabled when a user or MapInfo dialogue is active. LayMan allows a limited set of functions during this activity such as window focus change.</td>
</tr>
<tr>
<td>Icons indicate tables with unsaved edits, query tables. Grayed cells indicate read-only data.</td>
<td>Improved productivity - More information to the user.</td>
</tr>
<tr>
<td><strong>Layers</strong></td>
<td></td>
</tr>
<tr>
<td>All selected layers may have any attributes changed simultaneously</td>
<td>Improved productivity - The same style override on 3 layers takes 7 clicks compared to 21 in MapInfo layer control.</td>
</tr>
<tr>
<td>A rich set of layer and table information displayed in the grid. See feature counts, table paths, coordinate systems, style override settings. Run a Mapbasic script or program on a selected layer to display a key result.</td>
<td>Better information to the user - No need to generate specialist SQLs to display particular attributes.</td>
</tr>
<tr>
<td>Select and unselect a layer to quickly distinguish from other layers.</td>
<td>Better information and productivity - No more select and info clicks just to identify a layer on your map amongst all the others.</td>
</tr>
<tr>
<td>layMan for MapInfo Features and Benefits- Layer, Table, Workspace, Layout Management</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Show the bounds of selected layers, open tables, or tables in the catalog</strong></td>
<td><strong>Better information</strong> - Some layers are unselectable and unidentifiable in MapInfo (images). Showing bounds helps determine the scope of particular layers or determine the next tile name in a sequence.</td>
</tr>
<tr>
<td><strong>Group layers with common display and other attributes and manipulate as a single group</strong></td>
<td><strong>Improved productivity</strong> - Reduce the amount of time needed in layer control performing repetitive operations.</td>
</tr>
<tr>
<td><strong>Layouts</strong></td>
<td></td>
</tr>
<tr>
<td>A brand new view of your layout! See object type and all layout object properties.</td>
<td><strong>Improved productivity and easier to do layouts</strong> - Locate a frame or object by clicking on the grid. Change one or more object' properties in a single click.</td>
</tr>
<tr>
<td>Sort your layout grid by one or more columns to allow easier identification of common frames or objects</td>
<td><strong>Improved ease of editing layouts</strong> - Quickly see frames or objects that are not aligned correctly.</td>
</tr>
<tr>
<td><strong>Tables</strong></td>
<td></td>
</tr>
<tr>
<td>View Entire Selected Objects</td>
<td><strong>New Functionality!</strong> - Resize mapper to see one or more selected objects. Resize to see one or more layers including the cosmetic layer. Run the MapInfo Find Selection command on selected rows.</td>
</tr>
<tr>
<td>Table grid features complement MapInfo browser.</td>
<td><strong>Better Interface and Improved Productivity</strong> - The table column widths adjust on first display to suit the largest data item. Rowid and object type display as columns. Do a quick sort on one or more columns to quickly find that point in your region objects table or locate data readily.</td>
</tr>
<tr>
<td><strong>Workspace</strong></td>
<td></td>
</tr>
<tr>
<td>Run problem workspaces with errors resolved automatically or with user prompting.</td>
<td><strong>New functionality</strong> - The table catalog is used as a lookup for lost tables. Other errors are handled with a skip/correct/ignore approach.</td>
</tr>
</tbody>
</table>
What's New in LayMan version 3.00.

Overview

LayMan version 3.00 is a major release. It is now a Microsoft .NET client application and an OLE client of MapInfo Professional. It is designed to facilitate navigation between windows and enhance the traditional window, table, map, layout and workspace functions within MapInfo. Attached to an edge of your MapInfo work area, LayMan responds dynamically to your normal MapInfo window interaction. There have been major improvements to the user interface and the functions since the previous version. LayMan version 3 supports MapInfo Professional versions 5.5 to 8. It will most likely run without problems on earlier versions back to version 4.0 (the first version supporting Integrated Mapping or OLE automation). Supported Windows platforms are all .NET supported platforms (xp/2k/nt/me/98).

MapX is not supported in version 3. The previous versions support MapX.

Licensing and Registration

LayMan is licensed per CPU for US$49. LayMan’s basic functions are free use. Advanced functions are provided as a 30 session evaluation. Support LayMan development by purchase and registration. Advanced functions include:

1. The symbol catalog.
2. Workspace safe mode.
3. Map Optimal Layer Order.
4. Table metadata edit.
5. Application functions.
6. Table catalog filter.
7. Show table bounds on a mapper.

New and Enhanced Features

Recent Changes (v3.02, 8 Feb 06)

1. The registration dialogue has been updated to the Spatial Projects standard, including check for updates support and transfer registration to another PC.
2. The table catalogue loads significantly faster than the previous version (40 secs for 6000 items).
3. Show selected table bounds has been added to the tables, layers, table catalog item menus. This will add the MBR of chosen tables to the front map if they intersect or a new map if they don’t.
4. Table catalog filter provides the ability to quickly filter the catalog to a subset of types shown on the menu. The types include base, seamless, unmappable, image, link, query, view, WFS, WMS. Also filtered by object type: symbol, line, polygon, text, mixed. The filter also has a Show only tables intersecting map option.
5. Map selected tables now checks the current map to see if the table bounds intersect. In this case, the table is added to the
6. Info and registration dialogue button clicks now minimizes the LayMan window. The window is restored when the dialogues are closed.

7. **Optimal Layer Order** improvements in the ordering of image layers. Images are place on top of solid fill contiguous region layers and underneath transparent region layers.

8. A number of corrections and enhancements to workspace *safe mode* and *step execute*. *Approximate table name* matches now provided against the catalog.

**Version v3.01, 28 Sep 05)**

1. Buttons have been upgraded to a buttonpad style. A minimize and restore button allows LayMan to switch between a minimum size showing just the buttonpad and the user-specified window size.

2. MapInfo handshaking mode has been improved to reduce the amount of interaction with Mapinfo while still responding to window state changes.

3. Previously, workspace catalog, *Show by Workspace Path* was not sorting the list.

4. In the layer grid, the label override style was displaying in the feature override style column.

5. The symbol catalog did not support symbol changes in the cosmetic layer.

6. User functions in the layer grid were sometimes not saved and were not copied to multiple selected rows properly.

7. View entire layer on raster layers now functions correctly.

8. Seamless layers were dropping from mappers on window focus change or on selecting objects in the map window. This was apparently due to a MapInfo bug in that årea query table close for a query derived from a seamless layer causes the layer to be dropped from any mapperså¶. Query table operations on seamless tables in LM have been restricted.

9. Remove layer function wasn't updating the layer grid.

10. Workspace catalog display is refreshed after a build.

11. Optimal layer order wasn't supporting image layers correctly.


13. Refresh LayMan button may have caused LM to remain behind MI.

14. Mapper object select with the layer grid displayed was scrolling the navigation node in to view but not the layer grid row. Similarly, navigation layer node selection wasn't scrolling the layer grid into view. Fixed.

**Summary**

- Icons for objects
- Drag and Dock to any edge of the MapInfo work area
- Resizes on MapInfo size change
- Minimizes/restores with MI
- Improved data grid operation
- Auto arrange MI windows to fit LM position
- MI statusbar and scrollbar position detected
- Improved context menus
- Catalog build progress displays in the LM data grid panel.
- **Applications** shows running apps
- **Tables** has open tables.
- **Table catalog** provides the ability to open and map any registered table on your network. Filter the list by table type and intersecting current map window.
- **Workspace catalog** shows registered workspaces on the network. Edit or run from the list.
- **Application catalog** has registered applications. Run from the list.

**Docking and MapInfo Interaction**
Docking and MapInfo Interaction

Dock with any edge of the MapInfo workarea. Adjust panel widths to suit and make adjustments to layer properties with immediate changes in MapInfo.

Your previous dock status will be restored on subsequent sessions.

Window Positioning

While editing map objects, the data grid is best displayed at the top or bottom of the MapInfo window.

Window Navigation
Bring selected MapInfo windows to the front and then select frames within a layout or layers within a Mapper.

Browse the table, workspace, application catalogs.

**Concurrent Operation**

During a MapInfo operation, or at a MapBasic application statement that pauses operation, LayMan navigation panel may be used to bring windows to the front or browse for names.

**MapInfo Handshaking**

- Normal mode is full interaction with MapInfo
- Click "Ignore MapInfo" if you are about to run intensive window or object select/edit functions. This will remove a small CPU load from your processing and avoid unnecessary updates in LM.

**Layer and Table Icons**

When layers and tables are shown, icons indicate the layer type and contents. A catalog summary of table characteristics is a cornerstone for LayMan operations. Their simplest function is to provide quick user feedback as to table contents.

- Symbols only layer
- Symbol/polyline only layer
- Region only layer (unclassified in table)
- Contiguous, transparent region layer
- Contiguous, filled region layer
- Contiguous, semi-transparent region layer...
- Disjoint, transparent region layer...
- Thematic layer
- Grid layer
- View, Seamless or Query layer
- Image layer
- Linked DBMS layer
- WFS table
- WMS table...

Icons alongside the layername indicate if the layer has unsaved edits and if it is a query table.
Layer and Table Functions

Right click a layer or table icon to see a context menu of available functions.

Table Catalog Functions (applied to the whole catalog)

- Build catalog from network
- Empty Table Catalog
- Apply Filter
- Clear/show all
- Show by table path
- Remove duplicate references
- Show only tables Intersecting map
- Show base tables
- Show seamless tables
- Show unmappable tables
- Show image tables
- Show link tables
- Show query tables
- Show view tables
- Show WFS tables
- Show WMS tables
- Show Symbol tables
- Show Line tables
- Show Polygon tables
- Show Text tables
- Show Mixed tables

Table Item Functions (applied to a selection of tables in the open or catalog list)

- Show selected table grid
- Show selected table bounds
- Map selected tables
- Show metadata on selected table
- Close selected tables
- Save Table
- Pack Table
- Pack Table Definition
- Add selected tables to catalog

Workspace Functions

- Validated workspace (runs without error)
- Checked and runs with an error
- Unvalidated – not yet checked
- Checked and runs with an error.

Workspace Catalog

Build catalog from network and run each workspace in safe mode to check validity.
Workspace Functions

- Safe mode detects and corrects for:
  - already open tables
  - non-existant paths but with catalog entries
  - opened but unused tables
  - Dim statement errors (already dimensioned)
  - Any MapInfo error (traps for user correction)

Safe mode can be run on all catalog entries without user interaction to check for errors.

- As each line executes, an icon indicates the status of that line as:
  - run successfully
  - currently running this line
  - run and edited
  - skipped (at user command)
  - exited at this line (in safe mode) due to error
  - exited at this line due to user command

Workspace Safe and Step Modes

Icons give a clear indication of the status of each statement as it runs. Provides for auto or manual correction of problems.

<table>
<thead>
<tr>
<th>Rowid</th>
<th>Flag</th>
<th>VxorLine</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Step execute a workspace, repairing broken table references.

Application Functions

- Uses RemoteMsgHandler to interrupt, pause, message or end an application. Sample MBX and MB provided.

Symbol QuickPick

- A customisable, well organised and fast symbol picker for existing map symbol objects. Catalog builds from standard MI fonts. Edit class table and add your own fonts.
  - Click on mapper point object and click catalog symbol to change.

Table View and Edit

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Table View / Edit
Navigation window provides a 2-level tree view of windows, layers and tables. List is updated dynamically as MapInfo windows gain focus, open and close.

Click to set focus. Double click to activate the table, mapper or layout in the edit grid on the right.

Table grid edits include data checking with warning messages. The object column is exposed allowing object properties to be changed with the other attributes.

The initial display of table grid data is formatted such that column widths adjust to the largest data item.

Layout Grid - View and Edit

Layout grid provides layout object properties for select and editing. Easy to find and select small or hidden frames and objects. Click the object type cell to quickly adjust properties.
LayMan has been designed as a companion for MapInfo Professional. It will assist with simple operations in most aspects of your MapInfo usage. This assistance is in the form of additional functions which have no equivalent in the current MapInfo interface or single functions that string together a number of primitives to improve productivity. The presentation of information is in a more intuitive form, with icons representing the state of the object of interest.

This page illustrates a number of solutions to issues facing MapInfo users.

### Map and Layer Control Solutions

#### Dynamic layer control

I need to configure a map with multiple style and label changes, but see the changes as they are made, rather than resolving conflicts with multiple layer control sessions.

Use the LayMan map grid

Set up your map and load the LM map grid.

Confirm a layer for changing

Click the grid cell to change an attribute...

Show selected table bounds

Select this Layer

Confirm the change and continue..

#### Changing attributes for multiple layers simultaneously

I have style changes to make to multiple layers simultaneously and would like to apply the same change to multiple layers. I would like to tune font sizes quickly for these layers.

Use the LayMan map grid

Select the layers to be changed.
Extended layer information

For performance and accuracy, I want to check that all layers in my current map have the same projection and datums.

<table>
<thead>
<tr>
<th>Layer</th>
<th>Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>aus_ft_4</td>
<td>CoordSys Earth Projection 1, 0</td>
</tr>
<tr>
<td>syd_st_301</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_300</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_302</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_304</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_400</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_305</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_320</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>syd_st_401</td>
<td>CoordSys Earth Projection 1, 12</td>
</tr>
<tr>
<td>alltypes_p4</td>
<td>CoordSys Earth Projection 1, 33</td>
</tr>
</tbody>
</table>

No or mixed datum indicates potential problems which should be resolved.

Table Catalog Solutions

Find tables that contribute to a map

I have a new project and need to review what maps I have available in the project area. I have 5000+ TAB files on my network including seamless, linked and WFS tables.

Use the LayMan Table Catalog

Double click the catalog to load and display
Open an index map or a map known to cover the area of interest.

Zoom to the project area.

Filter the catalog to show all tables intersecting the map window.

If necessary, filter the list further by selecting table types and contents.

Select a table and confirm its coverage.
Use an index of image tiles to identify tile names

I have a seamless table of image tiles, but would like to identify each by name. I can't select or use the Info tool in MapInfo Pro and have to resort to toggling visibility on each layer.

Use the LayMan Table Catalog

Double click the catalog to load and display

Open an index map or a map known to cover the area of interest.

Use the catalog filter to show intersecting, image and seamless tables. Select them all and click Show table bounds.
My tables have moved!

My TAB files have been moved to new locations on the network and workspaces now fail on open. I can't use an editor to change all my workspaces as the path changes are not consistent. There are too many directory locations to use the MapInfo Pro Search directories.

Use the LayMan Table Catalog and Workspace Safe mode.

Set up your map and load the LM map grid.

The workspaces are opened, run and corrected where possible.

Uniquely located table paths are substituted from the table catalog. Unlocatable and unused tables (not referred to elsewhere in the workspace) are commented out ...
Dealing with workspace errors

A workspace fails with an error due to an unknown table.

*Step Execute* and *Safe Mode* pause when an error is found. If the error is a missing table, a list of exact matches in different locations or approximate matches is presented. Select the closest table from the approximate match list.

Use the LayMan Workspace *Step Execute* or *Safe Mode* to correct.

Workspace Independence

I have several workspaces that I need to run consecutively and combine the output maps on a layout. Any subsequent *open workspace* produces errors due to open table references to already open tables.

Run the first workspace conventionally. Locate the 2nd and 3rd in the workspace catalog and Run Safe.