MapInfo Pro

Version 17.0.3

MapInfo Pro Release Notes

Contents:

Introduction

This document gives you a list of the new and enhanced features introduced in this release. For details on these features, see What's New in MapInfo Pro chapter in the MapInfo Pro *Help System*. It also provides information about resolved issues and known issues that are important to MapInfo® Pro users.

Notes about this Release

MapInfo Pro

What's New in MapInfo Pro

Thank you for upgrading to the most advanced computer mapping product in the Pitney Bowes Inc. software family! As the field of computer mapping continues to expand, Pitney Bowes Inc. leads the way with new products that are designed to fulfill your computer mapping needs from the most basic to the most specialized. This is a list of the most important features and enhancements scheduled to be released with MapInfo Pro 17.0.3.

Here are the highlights:

1. **MapInfo Pro Python Add-in**

   Leverage the power of Python scripts to develop add-ins and extensions within MapInfo Pro. Take advantage of the Python language and its existing libraries/modules when writing MapInfo Pro add-ins. We have provided Python developers and data analysts an easier way to work with MapInfo data by providing access to MapInfo Pro table data.

2. **MapInfo Marketplace Preview**

   Easier search for apps with rich descriptions and simple updates. The MapInfo Marketplace is an online repository embedded into MapInfo Pro. This repository offers you a wide variety of downloads including sample data sets, custom symbols, and Layout Templates to help you increase your productivity and complete your work faster using the tools and data shared by the MapInfo Pro community.

3. **Command Editor Tool Update**

   The Command Editor Tool now has a new name and a host of new and updated features.

4. **Customizable shortcuts**

   Faster mapping with user-customized single key shortcuts. You can now customize single key shortcuts for mapper window by making/modifying entries in the `MapInfoPro.MNU` file under `ArrayOfMapInfoProKeyShortcut` tag.

5. **Geocode Tool Enhancements**

   Updated Create Points option and Premium Geocoding pricing.

6. **Backup User Modified Settings File**

   The first time you start MapInfo Pro after an upgrade, any user-specific settings files that have been modified are backed up.

7. **Drivetime Regions Tool Update**

   Premium Drivetime pricing has been revised and now costs three credits per query.

8. **Coordinate Systems and Projections**

   New Polar Stereographic entries added for use in the Universal Polar Stereographic Projection category along with new EPSG codes to bounded and unbounded Estonian Coordinate systems.

9. **MapInfo MapCAD Update**

   New version v1703 (18) of MapCAD.

10. **License Server Utility Update**

    New version 5.1 of the License Server Utility.

11. **Resolution of over 24 customer issues**

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MapInfo Pro Python Add-in

MapInfo Pro now support writing add-ins in Python language. This allows developers to take advantage of the Python language and its existing libraries/modules when writing MapInfo Pro add-ins. Python, with its feature rich set of libraries, is a very popular platform for Data Analysis and Visualization. We have provided Python developers and data analysts an easier way to work with MapInfo data by providing access to MapInfo Pro table data. While you can make use of any of the libraries and functionality available to Python, the ability to perform data analysis on MapInfo Pro table attribute data using the rich set of available data analysis tools (for example, pandas, SciPy, matplotlib, etc.) adds more capabilities and functionalities to existing ones.

Setting Up MapInfo Pro Python Add-in

Python Setup

1. Get latest 64-bit installer of Python version 3.7 version from: **https://www.python.org/downloads/**

   Note: Make sure to use the Windows x86-64 executable installer under Downloads.

2. Run the installer as an Admin and choose **Custom Install**.
3. Make sure you are installing for ALL Users (Install Directory will default to: `C:\Program Files\Python37`).
4. Check box for setting PATH variable and pre-compiled binaries.

Installing GDAL Python Bindings

1. Download the 64-bit Python installer.
2. Run the **OSGeo4W** setup program.
3. Select **Advanced Install** and press **Next**.
4. Select **Install from Internet** and press **Next**.
5. Select an installation directory. The default suggestion is fine in most cases. Press **Next**.
6. Select **Local package** directory. The suggestions is fine in most cases. Press **Next**.
7. Select **Direct connection** and press **Next**.
8. Choose **download.osgeo.org** and press **Next**.
9. Search **GDAL**, and install GDAL version.
10. If you have installed OSGeo4W in `C:\OSGeo4W64`:
    - Then add `C:\OSGeo4W64\bin` to Path system environment variable.
    - Define GDAL_DATA to `C:\OSGeo4W64\share\gdal`.
    - Change paths as per your installation.
11. Open a command prompt window and execute `"pip install --global-option=build_ext --global-option="-IC:\OSGeo4W64\include" --global-option="-LC:\OSGeo4W64\lib" gdal"`
12. Close the command prompt window.
13. Open a new command prompt window.
14. Type `Python` and press **Enter**. This will open python interactive prompt.
15. Type `"from osgeo import ogr"`.

This should work without error verifying your GDAL python binding install.

Machine Environment Setup

Set the following two SYSTEM environment variables: to the Python installation directory (for example, C:\Program Files\Python37):

1. PYTHONPATH
2. PYTHONHOME

Setup Python Debugging using Visual Studio Code (VSCODE)

1. Install `Python` and `pylint` extension and restart VSCODE.
2. Initialize configurations. A configuration drives VS Code's behavior during a debugging session. Configurations are defined in a `launch.json` file that's stored in a `.vscode` folder in your workspace.

3. To initialize debug configurations, first select the **Debug** View in the sidebar.

   Note: If you don't yet have any configurations defined, you'll see "No Configurations" in the drop-down list, and a dot on the settings icon:

4. To generate a `launch.json` file with Python configurations, do the following steps:

   - Select the **Settings** button or use the **Debug > Open** configurations menu command.
   - In the **Select Environment** drop-down list that appears, select `Python`.

   The Python extension then creates and opens a `launch.json` file that contains number of pre-defined configurations. You can modify configurations (to add arguments, for example), and also add custom configurations.

```
Python: Attach or Python: Remote Attach configuration must be defined
 like this.
{
            "name": "Python: Remote Attach",
            "type": "python",
            "request": "attach",
            "port": 5678,
            "host": "localhost",
            "pathMappings": [
                {
                    "localRoot": "${workspaceFolder}",
                    "remoteRoot": "${workspaceFolder}"
                }
            ]
}
```

5. After the initial configuration is done, setup VSCODE for remote debugging.

   - Install `ptvsd` using `python -m pip install --upgrade ptvsd` into your environment.
   - Default Port for that `ptvsd` use for debugging is **5678**. You may need to open the port for debugging in the appropriate firewall or other networking configuration.

   After the above setup is done VSCODE can be used for writing and debugging python add-ins.

   For more details refer to VSCODE python debugging :
   https://code.visualstudio.com/docs/python/debugging

Related Articles

- Python Tutorial: **https://docs.python.org/3.7/tutorial/index.html**
- Python Documentation: **https://docs.python.org/3.7/index.html**

Using MapInfo Pro Python Add-in

Creating MapInfo Pro Python add-in

To create a MapInfo Pro add-in in python:

1. Set up your development and debugging environment, **Setting Up MapInfo Pro Python Add-in** on page 3
2. Use one of the existing python add-in templates to start with your add-in. The MapBasic 17.0.3 installation contains two python add-in templates for creating a simple MapInfo Pro add-in or a layout custom frame add-in in python.
   - `SAMPLES\RIBBONINTERFACE\Python\py_addin_templates\Simple`
   - `SAMPLES\RIBBONINTERFACE\Python\py_addin_templates\CustomFrame`
3. Copy one of the above add-in template and start modifying it. Start with renaming the files (PY and MB) to your add-in name.
4. Rename module reference as per your new file names.

   Note: The PY file contains TODO comments to help you modify the code as per your requirement.

5. To load the add-in into MapInfo Pro, build the MB file using MapBasic 17.0.3 and run the MBX.

Note: Name of the MapBasic MB file should be same as the main python module file.

Note: The class below should be present in main python module file to load the add-in.

```
# this class is needed with same name in order to load the python
addin and can be copied
# as it is when creating another addin.
class main():
    def __init__(self, imapinfopro):
        self._imapinfopro = imapinfopro

    def load(self):
        try:
            # uncomment these lines to debug the python script using
 VSCODE
            # Install ptvsd package into your environment using "pip
 install ptvsd"
            # Debug in VSCODE with Python: Attach configuration

            # ptvsd.enable_attach()
            # ptvsd.wait_for_attach()

            # here initialize the addin class
            if self._imapinfopro:
                # obtain the handle to current application if needed
                thisApplication =
self._imapinfopro.GetMapBasicApplication(os.path.splitext(__file__)[0]
 + ".mbx")
                # TODO: change your addin class name here.
                self._addin = MyAddin(self._imapinfopro,
thisApplication)
        except Exception as e:
            CommonUtil.sprint("Failed to load: {}".format(e))
```

```
    def unload(self):
        try:
            if self._addin:
                self._addin.unload()
                del self._addin
            self._addin = None
        except Exception as e:
            CommonUtil.sprint("Failed to unload: {}".format(e))

    def __del__(self):
        self._imapinfopro = None
        pass
```

Debugging the Python Add-in in VSCODE

1. In VSCODE, open the folder of your python add-in or any python add-in sample (example : `.\SAMPLES\RIBBONINTERFACE\Python\HelloPython`)
2. Compile the add-in *.mbx using MapBasic IDE or Notepad++, etc.
3. In your python add-in source code, add the following lines.

```
import ptvsd
# Allow other computers to attach to ptvsd default port.
ptvsd.enable_attach()
# Pause the program until a remote debugger is attached
ptvsd.wait_for_attach()
```

   Note: In case you are debugging an existing sample uncomment the code snippet above.

4. Run the add-in MBX in MapInfo Pro v17.0.3 or above. Now once MBX is run in MapInfo Pro, you will notice a wait cursor denoting that the process in waiting for some debugger to attach to it.
5. Switch to **Debug** View in VS Code, select **Python: Attach configuration**.
6. Set a breakpoint in the code where you want to start debugging.

   Note: Setting a single breakpoint on the statement immediately following the `ptvsd.wait_for_attach()` line may not work. Set at least one other breakpoint on another statement.

7. Start the VS Code debugger using the modified Python Attach configuration. VS Code should stop on your locally-set breakpoints, allowing you to step through the code, examine variables, and perform all other debugging actions. Expressions that you enter in the Debug Console are run on the remote computer as well.
8. During remote debugging, the debugging toolbar appears. On this toolbar, the disconnect button (`Shift+F5`) stops the debugger and allows the remote program to run to completion.

MapInfo Marketplace Preview

The MapInfo Marketplace is an online repository embedded into MapInfo Pro. This repository offers you a wide variety of downloads including sample data sets, custom symbols, and Layout Templates to help you increase you productivity and complete your work faster using the tools and data shared by the MapInfo Pro community.

The main purpose of this Marketplace is to improve the customer experience by making it easier to discover and maintain MapInfo Pro add-ins and tools. Note that all existing add-ins and tools would continue to be free. Going forward, we also plan to introduce new MapInfo Pro apps that would extend the core functionality of MapInfo Pro. These apps would be available to MapInfo Pro customers on a try-before-you-buy, evaluation version basis before making a purchase.

The Marketplace is a tool that allows us to be more agile and responsive to our customer's needs. Our intention with MapInfo Marketplace is to roll-out features and fixes to you quickly and effectively thereby reducing the time-frame between requirement, development and delivery.

We would also continue to deliver MapInfo Pro add-ins and tools that we develop through the usual MapInfo Pro releases.

Accessing the MapInfo Marketplace

The MapInfo Marketplace is auto-loaded when you start MapInfo Pro. Click on **MapInfo Marketplace** from the **Tools** button group under the **HOME** tab to launch the MapInfo Marketplace. But if for some reason, you do not see this control, you may need to load the add-in manually using the followings steps:

1. Click the **HOME** Tab, then click **Tool Extensions** to launch the **Tool Manager** window.
2. Under the **Registered** tab in the **Tools Manager** window, double-click on **MapInfo Marketplace** to load the add-in. The **MapInfo Marketplace** button should now appear on the **HOME** tab under the **Tools** button group. It may take a while the first time it runs as it checks for MapInfo Marketplace updates and performs any necessary upgrades.

Note: The MapInfo Marketplace requires that you have an online Pitney Bowes account. If you are not already logged in, you will be required to enter your credentials. This is to ensure that we deliver an improved customer experience by helping you keep track of your downloads and recommend add-ins that are tailored to your usage and requirements.

Using the MapInfo Marketplace

To use the MapInfo Marketplace:

1. Click on **MapInfo Marketplace** from the **Tools** button group under the **HOME** tab to launch the MapInfo Marketplace and display a list of products available for download.
2. Click on the product you wish to download and install. This displays the product's details, screen shots, publisher information, etc. along with an **Install Product** button.
3. Click on the **Install Product** button to download and install the selected product.

   Once installed, the product appears under the **Running** tab in the **Tool Manager** window.

Note: Downloaded Products are only registered but not auto-loaded in MapInfo Pro. Therefore, when you restart MapInfo Pro, these products will not auto-load but would have to be manually loaded from the **Registered** tab.

If you want a downloaded product to run every time MapInfo Pro starts, you may choose to auto-load the product.

1. On the HOME Tab, click "Tool Extensions" button to launch the Tool Manager window.
2. Click "Registered" tab in the Tools window.
3. Check the **AutoLoad** checkbox for the tool you wish to auto-load.

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MapInfo Viewer

MapInfo Pro users who register with a Pitney Bowes online account are able to run MapInfo Pro in a connected `Viewer` Only (subscription) mode.

In order to run the Viewer version of MapInfo Pro, you must first create an online account. You can do this from the MapInfo Pro **Backstage Services** Tab, when you first run MapInfo Pro Viewer, or from here: **https://signup.pitneybowes.com/signup/mipro**

Note: You can switch which user is logged in on the **Backstage Services** Tab.

See **Capabilities and Limitations** on page 9 for more information on the MapInfo Viewer features.

Capabilities and Limitations

When running MapInfo Pro in **Viewer** (subscription) mode, you are connected to your Pitney Bowes account upon start-up. Each MapInfo Pro account is assigned to a `Viewer` subscription plan which identifies the set of features available to you in MapInfo Pro. Currently there is only one plan - `Viewer`. In future, we may offer other free or paid plans with different levels of functionality. In addition, which features are available in each plan can change over time as features are added or removed from the plan.

MapInfo Pro Viewer supports all languages supported by MapInfo Pro.

Features and Limitations

- MapInfo Viewer (subscription) mode allows you to open and view any MapInfo Pro workspace (.wor) file. In addition you can open MapInfo .tab files and other supported formats (such as geopackage, csv, excel, sql server, postgis, etc.) in order to view and understand your data.
- Editing of data is not supported (restricted). Saving of any changes to the workspace is also not allowed.
- Limited analysis is allowed such as queries, selections, browsing data, turning map layers on/off. Printing (and exporting to pdf) of Maps and Layouts are allowed.
- Limited editing of Layout text and image frame are allowed before printing.

- Only a limited set of Tools are allowed to run. Running a MapInfo Pro Add-in or program (.mbx) is prohibited.
- Bing basemaps and search functionality is only allowed if your organization has a Bing Key, which can be entered on the **Backstage Licensing** Tab.
- It is expected that some users in your organization will have a fully licensed version of MapInfo Pro and can create workspaces to share and be viewed by other users running only the MapInfo Pro Viewer.
- Technical Support for MapInfo Viewer is limited to installation issues. To contact support for your location, refer to the support section on our website.

Note: If running MapInfo Pro in Viewer (subscription) mode, you cannot opt-out of the **Customer Experience Program** and this feature will be turned on by default. If user is running a normal licensed copy of MapInfo Pro then the Customer Experience Program is optional and may be turned on or off from the backstage (Pro Tab, Options, Application Preferences).

Styling

The Viewer uses a subdued gray theme, while MapInfo Pro has been updated to use a little more colorful blue theme.

If for any reason the old styling for Pro is desired you can change the "`OverrideDefaultStyle`" key to "`true`" in the `styles\MapInfoProStyle.xml` file under the MapInfo Pro installation folder.

Note: Inside this file is also a detailed description of the style changes we have made for Pro and the Viewer.

How To Run

The MapInfo Pro installer adds a shortcut (Icon) to the Windows Start Menu to start MapInfo Pro in Viewer (subscription) mode. This icon is located next to the regular MapInfo Pro Start Menu shortcut.

The same MapInfoPro.exe is used for both the normal licensed version of MapInfo Pro, the trial version and the Viewer (subscription) version. There are three ways to choose which mode to run MapInfo Pro in.

- Command line
  - to start Pro in Viewer mode: MapInfoPro.exe /Subscription=On
  - to start Pro in Viewer mode with a specific plan: MapInfoPro.exe /Subscription=plannid
  - to start Pro in full licensed mode: MapInfoPro.exe /Subscription=Off
- MapInfoPro.exe.config
  - Add key under appSettings section
  - <add key="Subscription" value="Off"/> to start Pro in full licensed mode
  - <add key="Subscription" value="On"/> to start Pro in Viewer mode

- <add key="Subscription" value="MIPRO_Viewer"/> to start Pro in Viewer mode with a specific plan named 'planid'

How do I switch from Viewer to the fully licensed version of Pro

Start MapInfo Pro from the shortcut on the start menu. When prompted enter your license key to activate MapInfo Pro.

Look and Feel

With the introduction of the MapInfo Viewer, we needed to visually distinguish between the two ways of running MapInfo Pro. For this, we have introduced new styling to MapInfo Pro and the MapInfo Viewer.

The Viewer uses a subdued gray theme, while MapInfo Pro has been updated to use a little more colorful blue theme.

If for any reason the old styling for MapInfo Pro is desired you can change the "`OverrideDefaultStyle`" key to "`true`" in the `styles\MapInfoProStyle.xml` file under the MapInfo Pro installation folder. (Same for MapInfo Pro Runtime)

Note: Inside this file is also a detailed description of the style changes we have made for MapInfo Pro and the Viewer.

The Viewer version of MapInfo Pro also has a slightly different icon in the Windows Task bar and MapInfo Pro main window. The Welcome window and About backstage pages both show which subscription plan is in use - typically 'Viewer'.

In addition to the limitation described above you will notice some visual differences. Parts of the MapInfo Pro user interface that are not needed are hidden to simplify the Viewer experience. The SPATIAL Tab is hidden for example, along with some groups from the Map and Table Tabs. Other commands on the ribbon are hidden or disabled. If a command is disabled due to not being available in the current plan, its tool-tip will indicate that.

When run in subscription mode Pro uses different docking and ribbon state file-names to allow for separate window and ribbon customizations based on the plan name. For example:

- MapInfoPro.RibbonState_Viewer.<language_code>.xml
- MapInfoPro.DockingState_Viewer.xml

File Associations

When MapInfo Pro is started by double-clicking on a registered file type such as workspace (*.wor) or table (*.tab) it checks the value of a registry key to determine whether to run in Viewer (subscription) mode or normal mode.

The registry key is located at

```
HKEY_CURRENT_USER\Software\MapInfo\MapInfo\Professional\1700\CloudVersion,
 and
```

```
HKEY_LOCAL_MACHINE\Software\MapInfo\MapInfo\Professional\1700\CloudVersion
```

If the **HKEY_CURRENT_USER** key exists, it uses that value, else it looks for the **HKEY_LOCAL_MACHINE** value.

If the value of the `CloudVersion` registry key is = 1, MapInfo Pro is started in subscription mode.

If the value of the `CloudVersion` registry key is = 0 or the key is not present, MapInfo Pro is started in normal licensed mode.

To switch the default value of this registry key, there are two files installed in the same location as where MapInfo Pro is installed.

- DefaultToFullPro.reg - Default to normal licensed mode.
- DefaultToSubscription.reg - Default to Viewer (subscription) mode.

Double-click on either file to set the registry key value.

New Layout Commands

We have added four new Layout commands to distribute selected items in a Layout. The four commands are available as Run Menu Commands, and from the **Customize Ribbon** dialog (so they can be used in the Quick Access Toolbar (QAT), or added to a mini-toolbar such as the Layout mini-toolbar, etc.).

- **Distribute Horizontally**: distributes the horizontal space between selected objects evenly with respect to each other. The selected objects are distributed with respect to the left, and right boundaries of the MBR of the selected objects.
- **Distribute Vertically**: distributes the vertical space between selected objects evenly with respect to each other. The selected objects are distributed with respect to the top, and bottom boundaries of the MBR of the selected objects.
- **Distribute Horizontally on the Page**: distributes the horizontal space between selected objects evenly with respect to the current page settings. The selected objects are distributed with respect to the top, bottom, left, and right margins of the layout page.
- **Distribute Vertically on the Page**: distributes the vertical space between selected objects evenly with respect to the current page settings. The selected objects are distributed with respect to the top, bottom, left, and right margins of the layout page.

See **Customizing the Ribbon** in the MapInfo Pro help to add new commands using the **Customize Ribbon** dialog.

Out of the four new commands, the following two commands are also available in the **Alignment** menu under the **LAYOUT** tab:

- **Distribute Horizontally**
- **Distribute Vertically**

GeoMap Base Maps

Three new base maps have been added. These new base maps are tile server maps using Pitney Bowes GeoMap service. The service requires login to your Pitney Bowes account. The new base maps are **GeoMap Bronze**, **GeoMap Steel**, and **GeoMap Iron**. The maps have the same underlying data but are rendered with different color themes. To preview these themes and for more information see: **https://locate.pitneybowes.com/geomap**.

Adding GeoMap Base Map Layers

To access the new maps, navigate to the **HOME** tab and expand the **Open** button. The three GeoMap items are in the **Base Maps** group adjacent to the Bing base maps.

If you click on a GeoMap button, if the current window is a map, MapInfo Pro adds the layer to it. If the current window is not a map or there are no windows open, then MapInfo Pro creates a new map with the layer. As noted above these maps require login to your Pitney Bowes account. If you are not logged in, you will be prompted to do so when using these maps. You can also login by going to the Pro tab and clicking Services.

GeoMap Table Names and Location

There are three tables for **GeoMap Bronze**, **GeoMap Iron**, and **GeoMap Steel** installed in to a subdirectory called `TileServer` where MapInfo Pro is installed. The files are:

Table 1:

GeoMap Bronze	GeoMap Iron	GeoMap Steel
GeoMapBronze.TAB	GeoMapIron.TAB	GeoMapSteel.TAB
GeoMapBronze.XML	GeoMapIron.XML	GeoMapSteel.XML

MapInfo Pro version 17.0.1
Multi-Language Installer

Starting with MapInfo Pro version 17.0.1, we are changing the way we deliver new versions of MapInfo Pro. MapInfo Pro used to deliver patches for update releases, which required them to be applied on a base install. Now update releases of MapInfo Pro are being delivered as upgrade installers. The upgrade installer, while bigger in size than a patch, allows us to be more flexible in delivering new features. In addition, you no longer need to apply cumulative patches and can just use the latest upgrade installer for a new install or an upgrade over any previous version of version 17.0.

For more details, see **Installing / Upgrading MapInfo Pro** on page 77

MapInfo Pro version 17.0.0

Customer Experience Improvement Program

We have created a Customer Experience Improvement Program (the “EIP”) in order to collect information about how our users and customers use our products, problems they may encounter while using the products, and features and functions most often used by our customers. This allows us to provide thoughtful, continuous improvement to ensure that we offer our customers the best user experience available.

Participation in the EIP is voluntary. During the installation process you will be prompted to participate in EIP. You may or may not elect to participate upon installation of the product, and at any time thereafter. Go to the options, settings, or help menu for your product and change your settings to end your participation.

You can update your EIP participation by adding a DWORD entry to the following registry key:

```
\HKEY_LOCAL_MACHINE\SOFTWARE\MapInfo\MapInfo\Professional\1700\
```

Add a new DWORD entry **`Optin`** with the following values depending on your selection:

- 0 = EIP Turned off
- 1 = EIP Turned on

You can also manage your EIP participation using the following switch when installing MapInfo Pro using the command-line:

- CUSTEXPPRG=\"True\" will tell the installer to add the **`Optin`** registry entry with the value 1
- CustExpProg=\"False\" will tell the installer to add the **`Optin`** registry entry with the value 0

For details on command-line installation, see **Installing MapInfo Pro Silently**

The Welcome Window

The Welcome Window is an informative and functional page that appears when you start MapInfo Pro. It provides you a quick access to recently used tables and workspaces and the possibility to open new ones.

New Sample Workspace

A sample workspace containing **StreetPro**, **POI**, **Parcel** and **Elevation** data for Washington DC area is now available by default when you install MapInfo Pro at the following locartion:

```
<MapInfo Pro Installation
Directory>\Professional\SampleWorkspace\WashingtonDCSample.WOR
```

You can also access this workspace from the **Welcome Page**. Click **Sample Workspaces...** under **Workspaces** on the **Welcome Page.**

Other sample datasets will also be available for download in the future.

Quick Search Tool

You can use **Quick Search** to quickly search and execute commands on the MapInfo Pro ribbon. These commands might be grouped or nested under different tabs, sub-menus or backstage items

but the **Quick Search** tool displays a list of all relevant commands as you type your query in the search box.

Geocode Tool

Geocode is a MapInfo Pro tool that is loaded by default when you install MapInfo Pro. This tool replaces the older **Geocode using Server** Utility. Using this tool, you can assign geographic coordinates to your data, which can be street addresses. Point values assigned to each address turn each record into a geographic object that MapInfo Pro can display on a map. Visualizing your records on a map can make the relationships among your data clearer. You can display your geocoded records against a street map, a postal code centroid map, a county map, or whatever is most appropriate to your needs. You can then use the wide variety of functions available in MapInfo Pro mapping software to perform querying, create thematic maps, create territories, and perform many other types of geographic analysis.

MapInfo Pro accomplishes this by connecting to:

- Spectrum Spatial Server.
- Pitney Bowes LI APIs.

You can load or unload the **Geocode** tool from the **Tool Extensions** drop-down list under the **Tools** group on the **HOME** tab.

Note: The older **Geocode using Server** utility is visible only when the **Geocode** Tool is not loaded. When loaded, the **Geocode** tool takes precedence and replaces the older version.

Note: Starting from version 17.0.3, the **Create Points** option under **Advanced Options** is selected by default.

How do I access the Geocode Tool?

1. There must be an open table for this command to work.
2. On the **SPATIAL** tab, in the **Create** group, on the **Geocode** list, click **Geocode using Server** from the list.

Layout Templates

A **Layout Template** is as a user defined format that contains a Layout window with required placeholders for maps/browsers/etc. in a specific arrangement for presentation. You can choose from a list of pre-built templates provided as part of MapInfo Pro or create and define your own and automate the filling on contents within it. **Layout Templates** are made up of empty frames that get filled in with contents of other windows such as maps or browsers, static content (text, shapes, images, etc) and dynamic text such as date, path, etc. They are portable and can be used in any environment in which MapInfo Pro operates and with any MapInfo products.

Drivetime Regions Tool

Drivetime Regions is a MapInfo Pro tool that is loaded by default when you install MapInfo Pro. This tool replaces the older **Drivetime Regions (Table)** Utility that used an Envinsa 4.0 server. Using this tool, you can access a Driving Regions server to create time-based and distance-based buffers for the selected table entries. MapInfo Pro accomplishes this by connecting to:

- Spectrum Spatial Server.
- Pitney Bowes LI APIs.

You can load or unload the **Drivetime Regions** tool from the **Tool Extensions** drop-down list under the **Tools** group on the **HOME** tab.

Note: The older **Drivetime Regions (Table)** utility is visible only when the **Drivetime Regions** Tool is not loaded. When loaded, the **Drivetime Regions** tool takes precedence and replaces the older version.

How do I access the Drive Regions command?

1. On the **SPATIAL** tab, in the **Create** group, on the **Regions** list, click **Drive Regions** from the list.

Layout Smart Text

Layout Smart Text is an enhancement to text frames in the Layout Designer. Previously you could only add static text to text frames in the Layout Designer. Smart Text provides the ability to embed dynamic values that can change based on the context. For example, you may wish to include the current date or the layout page number as text in a Layout. Smart Text uses MapBasic expressions to accomplish this.

MapInfo Data Access Library

The MapInfo Data Access Library (MDAL) is a set of classes and interfaces that allows .NET developers to create MapInfo Pro Addins that can easily Create, Search, and Update MapInfo Tables and other supported database formats such as Oracle, SQL Server, GeoPackage. The Library is based on a subset of the MapInfo MapXtreme™ SDK product, mainly the Data Access functionality. Currently the MapInfo Data Access Library is only available for use with MapInfo Pro Add-ins.

- Fully capable Data Access Object Model – Create MapInfo Tables, Insert, Update, Delete, Select, Join multiple tables, Search using a well thought out API.
- Full MISql Support – Note that there are differences from MapBasic Syntax.
- Complete Geometry Object Model – Supports efficient reading, creation and editing of all MapInfo Geometry types, including text objects. Also supports conversion to and from Well Known Binary, Well Known Text and GeoJson formats.
- Full Coordinate System Support.
- Thread-Safe – Can be used to create background tasks in MapInfo Pro or run processing on secondary threads.
- Supports most MapInfo Pro Data formats.

  Note: Not all formats are supported. For example, no spatial support for postgis.

- MapInfo Pro style transactions on MapInfo and MapInfo Extended tables - This allows for background threads to edit tables open in MapInfo Pro and let the end user decide to commit or revert the changes.
- Documentation – API Reference Guide, User Guide, MISql reference.

For more details, open your MapBasic installation, click **Help**, then click **Extensibility Reference** and refer to the **MapInfo Data Access Library** section of the **MapInfo Pro Extensibility Reference** Guide.

Mini Toolbar for Layout Window

You can use the Mini Toolbar on the Layout window for quick access to often used actions. Tasks like Select, Pan, Zoom In / Zoom Out, Alignment and many more are directly available on the Layout window when you right-click inside (above or below the context menu depending on where you click in the window).

Layout and Mapper Mini Toolbar Customization

The Layout and Mapper Mini Toolbars can be customized to suit your needs and work style. Commands can be added to and removed from the toolbars.

To customize a toolbar:

1. Right-click on the ribbon and choose **Customize Quick Access Toolbar** to open the **Customize Ribbon** dialog box.

   This dialog is also available from the **Customize Quick Access Toolbar** menu, in the upper left corner of the desktop, by choosing **More Commands**.

2. Highlight **Map Toolbar** or **Layout Toolbar** in the left pane to access the customizable settings.
3. In the left pane, highlight a command and click the **Add** button.
4. To remove a command from a custom tab or group, click the **Remove** button.
5. To organize the commands within a tab or group, use as the Up and Down arrows. You can also reorder any of the tabs, including the standard ones.
6. Click **OK** to save your changes.

You can also create toolbar customizations for added ease of use. This would allow you to have a different selection of commands on the toolbar for every customization.

To create a new customization:

1. Customize a toolbar as per your requirement.
2. Enter a Name in the **Customization Name** text box.
3. Click on the "**+**" icon above the **Customization Name** text box to add and save the customization.
4. Use the Save and Delete icons to save updates to or delete a customization.

The Map mini toolbar name is visible in the Status Bar when a map window is active. It will either be default or the name of a customized mini-toolbar, whichever is active.

In addition, you can switch between your map mini toolbars by pressing the Space key. It will switch to the next mini toolbar and change the name on the Status Bar to reflect that. If you click on the mini toolbar name text or the arrow next to it, a menu of the available map mini toolbars is shown with the current one highlighted. You can make one of the mini toolbars current by clicking on its name.

Ribbon Customization

The MapInfo Pro ribbon can be customized to suit your needs and work style. For example, create custom tabs and custom groups to hold frequently used commands. Re-arrange tabs and groups to put commands where you want them. Minimize the ribbon to enlarge your work area.

Feature Manipulation Engine (FME) Upgraded to Version 2018

MapInfo Pro installs with the Feature Manipulation Engine (FME) 2018, which lets you open data directly to avoid having to translate it separately and work with copies of the data in .TAB format. To see what is new in FME 2018, see http://www.safe.com/fme/new.

The FME from within MapInfo Pro opens following Universal Data formats:

- Autodesk AutoCAD (*.DWG, *.DXF)
- Bentley MicroStation Design (V7) (*.FC1, *.DGN, *.POS)
- Bentley MicroStation Design (V8) (*.FC1, *.DGN, *.POS)
- ESRI ArcInfo Export (*.E00)
- ESRI Legacy ArcSDE
- ESRI Geodatabase (File Geodatabase API) (*.GDB)
- ESRI Geodatabase (Personal Geodatabase) (*.MDB)
- ESRI Shapefile (*.SHZ, *.SHP)
- GML (Geography Markup Language) (*.GML, *.GZ, *.XML)
- Google KML (*KML, *KMZ)
- OS MasterMap Database
- OS VectorMap District
- OS VectorMap Local
- Spatial Data Transfer Standard (SDTS) (*.CATD, *.DDF)
- Vector Product Format (VPF) Coverage (*.FT)

Note: MapInfo Pro installs with a subset of FME that supports a limited number of formats. You can install the complete FME Suite from Safe Software for additional formats, and use it with mapInfo Pro. See Working with the Note: Suite for details. For the list of formats supported by the FME suit, see: **http://docs.safe.com/fme/html/FME_Desktop_Documentation/FME_ReadersWriters/Format-List-All**

For details about these formats, see **Feature Manipulation Engine (FME) Format Support** in the MapInfo Pro install Guide.

To access the FME and open universal data directly in MapInfo Pro; on the HOME tab, in the File group, on the Open list, click Universal Data. For details, see **Using Universal Data Directly** in MapInfo Pro Help

Enhancements and Updates

MapInfo Pro version 17.0.3

*Command Editor Tool Updated (**now called Keyboard Shortcuts**)*

The Command Editor Tool has been updated with the following changes.

1. The Tool is now titled **Keyboard Shortcuts** (the MBX file name remains the same).
2. The Tool is now auto-loaded.
3. The Tool adds a new Keyboard Shortcuts item to the Backstage Options Tab under the System group.
4. A new Tab allows you to customize single key mapper shortcuts.
5. You can press F2 on a selected item to edit the shortcut.
6. Search now also searches the menu item text.
7. You can now sort the list by clicking on the column headers.
8. Missing Layout commands are now able to be customized.
9. Help button added to dialog and tools.

Ability to customize single key mapper shortcuts

You can now customize single key shortcuts for mapper window by making/modifying entries in the `MapInfoPro.MNU` file under `ArrayOfMapInfoProKeyShortcut` tag. Refer to the following example to create your custom entries:

```
<!-- ArrayOfMapInfoProMapCommand section of the file contains the single
 key shortcut for map window function.-->
    <ArrayOfMapInfoProKeyShortcut
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <!-- MapInfoProCommand tag represents the overridden command
properties. Name attribute corresponds to a internal name of a MapInfo
 Pro command and its value should never be modified by the user.-->
        <MapInfoProKeyShortcut Key="M" Control="false" Shift="true"
CommandId="840" WindowType="ViewWindow" Description="View entire map"/>

        <!-- Make your new entry here.-->
    </ArrayOfMapInfoProKeyShortcut>
```

Note: This currently works only for the Mapper window. You can use the **Command Editor** tool (now called **Keyboard Shortcuts**) described below to customize mapper shortcuts via UI.

New Coordinate Systems and Projections

New Polar Stereographic entries added for use in the Universal Polar Stereographic Projection category. These systems can apply either a standard parallel OR scale factor at the pole. The two parameters are linked and one of these parameters can be calculated from the other one. MapInfo Pro uses a scale factor computed from the standard parallel of 70 degrees to achieve correct result.

http://earth-info.nga.mil/GandG/coordsys/polar_stereographic/polar_stereographic_computation.html

- "NSIDC Sea Ice Polar Stereographic North\p3413", 20, 104, 7, -45, 90, 0.969858190326, 0, 0
- "NSIDC Sea Ice Polar Stereographic South\p3412", 20, 104, 7, 0, -70, 0.969858190326, 0, 0

Estonian Coordinate systems

Added EPSG codes to bounded and unbounded Estonian Coordinate systems.

"--- Estonian Coordinate Systems ---"

- "L-EST97 1 mm tapsus (EUREF89)\p3301", 2003, 115, 7, 24, 57.51755393056, 58, 59.33333333, 500000, 6375000, -503054.52549999999, 5371945.4740000004, 1503054.5260000001, 7378054.5259999996"
- L-EST97 1 cm tapsus (EUREF89) \p3301", 2003, 115, 7, 24, 57.51755393056, 58, 59.33333333, 500000, 6375000, -9530545.2550000008, -3655545.2550000013, 10530545.260000002, 16405545.260000002"
- L-EST97 (EUREF89) \p3301", 3, 115, 7, 24, 57.51755393056, 58, 59.33333333, 500000, 6375000"
- L-EST 1992 (EUREF89)\p3300", 3, 115, 7, 24, 57.51755394, 58, 59.33333333, 500000, 6375000

There are new datums in this version:

- Geocentric Datum of Australia (GDA 2020 Datum) #1028

For a detailed list of enhancements, see **Coordinate System Enhancements by Version** in MapInfo Pro Help.

Geocode Tool Enhancements

Create Points

Starting from version 17.0.3, the **Create Points** option under **Advanced Options** is selected by default.

Premium Geocoding Pricing

Premium Geocoding pricing has been revised and now costs one credit per query. For latest pricing refer to:

https://locate.pitneybowes.com/geocode

Backup User Modified Settings File

The first time you start MapInfo Pro after an upgrade, any files that have been modified will be backed up into a folder named `backup_yyymmdd_hhmm (current date and time)` at the following location.:

```
%LOCALAPPDATA%\MapInfo\MapInfo\Professional\version
```

While MapInfo Pro installation is in progress, you will see a pop-up window with the following message:

```
Copying files and tools for first time use by this user.
```

If any files were backed up, a **Task** is created, and it is visible in the **Tasks** Window. The task has a command button to open the backup folder in windows explorer. The **View Log** command shows the name of the backup folder. A notification bubble on the MapInfo Pro status bar indicates that the task has completed (unless that preference is disabled). You can safely close the tasks window as this is purely informational. Advanced users can decide to restore their backed up files for use by MapInfo Pro.

Drivetime Regions Tool Update

Premium Drivetime Regions Pricing

Premium Drivetime pricing has been revised and now costs three credits per query.

MapInfo MapCAD Update

New version of MapCAD v1703 (18).

The MapInfo MapCAD tool is registered and auto-loaded when MapInfo Pro starts up. To load MapCAD, go to the **Tool Extensions** on **Home** Tab, click on **Registered** tab, then double-click on **MapCAD** entry in list of tools to launch.

MapCAD provides tools that work with MapInfo Pro to create maps that are appropriate for land development and surveying tasks.

The MapInfo MapCAD is a tool that installs under a subfolder called MapCAD. You can turn off MapCAD if you do not want to see these commands. To do this, on the **HOME** tab, in the **Tool Windows** group, click **Tool** Extensions. On the **Running** tab, click the arrow beside the name MapCAD to display an option to unregister this tool.

The following new MapCAD tools are available in this release:

1. **Point (Snap To Edge)**
2. **Line (snap to edge)**
3. **Polyline (snap to edge)**
4. **Polygon / Region (snap to edge)**

   These tools are similar to the standard functions for inserting objects into a map. These can not only snap to nodes, but also to edges. Activating the snap mode is not necessary.

5. **Fit Objects**

   Use the Fit Objects function to fit all selected objects to its neighboring objects in the same layer or a reference layer. Each selected object is considered, node by node, with neighboring nodes and edges from reference objects.

The following MapCAD tool has been updated:

1. **Create Parallel**: Improved usability when creating polygons

   The "left / right" option has been extended to "inside / outside" for polygons. This simplifies the creation of parallels, since the line direction is not obvious for this type of object.

For more details, refer to the MapCAD help system. The manufacturer provides a full help system to assist you in using this product. You can access this help from MapInfo MapCAD or on MapInfo Pro's backstage by selecting the **PRO** tab, clicking **Add Ins**, and then clicking **Help** under MapInfo MapCAD. For support, contact MapCAD incorporated directly. Their web site is: **http://www.geoas.de**.

License Server Utility Update

New version 5.1 of the License Server Utility.

If you have a previous version of the License Server Utility (LSU) installed to manage distributable licenses, then you must upgrade to the latest License Server Utility version 5.1. Using a previous version of the License Server Utility with MapInfo Pro 17.0.3 will cause MapInfo Pro to become unresponsive.

MapInfo Pro version 17.0.2

Geocode Tool Enhancements

We have made some enhancements to the **Geocode** Tool to improve the usability.

- The street level **PB Global Geocoder** is now set as the default Geocoding server. This will help produce better quality results by default.
- The **Geocode** Tool will now show only the text `PB Global Geocoder` next to the Server button when either of the PB Global geocoding servers is set as the default server. This should minimize confusion because the correct geocode request will be generated based on the setting in the **Geocode Level** control.

New MapInfo Pro Styling

With the introduction of the MapInfo Pro Viewer, we needed to visually distinguish between the two ways of running MapInfo Pro. For this, we have introduced new styling to MapInfo Pro and the MapInfo Pro Viewer.

The Viewer uses a subdued gray theme, while MapInfo Pro has been updated to use a little more colorful blue theme.

If for any reason the old styling for Pro is desired you can change the "`OverrideDefaultStyle`" key to "`true`" in the `styles\MapInfoProStyle.xml` file under the MapInfo Pro installation folder. (Same for MapInfo Pro Runtime)

Note: Inside this file is also a detailed description of the style changes we have made for Pro and the Viewer.

MapInfo Pro version 17.0.1

New MapBasic Tools

The following MapBasic tools have been ported or added to the 64-bit version of MapInfo Pro:

1. Drivetime Regions Tool
2. Geocode Tool
3. RDBMS Set MBR Tool

4. Rotate Map Window Tool
5. Disperse Tool
6. Transfer Labels Tool
7. Rotate Labels Tool
8. Symbol Maker Tool
9. Table Manager Tool
10. Window Manager Tool

MapInfo MapCAD Update

New version 10.0 of MapCAD.

The MapInfo MapCAD tool is registered and autoloaded when MapInfo Pro starts up. To load MapCAD, go to the **Tool Extensions** on **Home** Tab, click on **Registered** tab, then double-click on **MapCAD** entry in list of tools to launch.

MapCAD provides tools that work with MapInfo Pro to create maps that are appropriate for land development and surveying tasks. This update was for continued compatibility with MapInfo Pro and includes no new functionality.

The MapInfo MapCAD is a tool that installs under a subfolder called MapCAD. You can turn off MapCAD if you do not want to see these commands. To do this, on the **HOME** tab, in the **Tool Windows** group, click **Tool** Extensions. On the **Running** tab, click the arrow beside the name MapCAD to display an option to unregister this tool.

The manufacturer provides a full help system to assist you in using this product. You can access this help from MapInfo MapCAD or on MapInfo Pro's backstage by selecting the **PRO** tab, clicking **Add Ins**, and then clicking **Help** under MapInfo MapCAD. For support, contact MapInfo MapCAD incorporated directly. Their web site is: **http://www.geoas.de**.

Shortcut Keys

Map

The following key mappings were updated.

Action	Key	Comments
Toggle Snap mode	s	Lowercase s used to make uppercase S available for use with other commands.
Change cross-hair cursor	c	Lowercase c used to make uppercase C available for use with other commands.

Action	Key	Comments
Toggle Auto-Node	n	Lowercase `n` used to make uppercase `N` available for use with other commands.
Toggle Trace	t	Lowercase `t` used to make uppercase `T` available for use with other commands.

The following new key mappings were added.

Action	Key
Select All from selection Layer	Ctrl+A
View Entire Map	M
Change View Dialog	V
Zoom In Tool	z
Zoom Out Tool	Z
Info Tool	I
Map Options Dialog	O
Pan Tool	P
Select Tool	S
Label Tool	L
Create Legend Dialog	I
Create Theme Dialog	T
Unselect All	U
Change to next customized mini toolbar	Space

Action	Key
Insert Point Tool	1
Insert Text Tool	2
Insert Line Tool	3
Insert Polyline Tool	4
Insert Arc Tool	5
Insert Polygon Tool	6
Insert Ellipse Tool	7
Insert Rectangle Tool	8
Insert Rounded Rectangle Tool	9

Layout Alignment Enhancement

Smart guides now display a visual cue (an orange vertical or horizontal guideline) when a Smart Guide is actively being used to snap items together.. The item automatically aligns (snaps) to the edge of nearby items as if there is a guide line. Smart guides include the border of an item, so that items visually align.

Mapper Mini Toolbar Customization Enhancement

The Map mini toolbar name is visible in the Status Bar when a map window is active. It will either be default or the name of a customized mini-toolbar, whichever is active.

In addition, you can switch between your map mini toolbars by pressing the Space key. It will switch to the next mini toolbar and change the name on the Status Bar to reflect that. If you click on the mini toolbar name text or the arrow next to it, a menu of the available map mini toolbars is shown with the current one highlighted. You can make one of the mini toolbars current by clicking on its name.

MapInfo Pro version 17.0.0

Thematics

Individual Value Theme Bins in Layer Control

Individual Value Theme items are now supported in the **Layer Control** for a thematic layer. Individual bins visibility can be controlled through the **Layer Control**. Labels also respect bin visibility.

Graduated Symbol Themes Support in Layer Control

Graduated Symbol Theme items are now supported in the **Layer Control** for a thematic layer.

Layouts

Improvements to Snap in Layouts

The following are improvements to how snap to grid and guides work in Layout windows.

- We changed the way the grid displays on a layout page. It now draws using dots instead of lines to visually reduce detail. The grid does not display on your printout or output.
- Snap now happens when dragging items with the mouse. This gives instant visual feedback for where the item will position after letting go of the mouse. When dragging an item, it's top, left corner snaps to the closest grid intersection. If any edge of the item being dragged is moved within a few pixels of a guideline, that edge snaps to the guideline. When you are dragging a selection of more than one item, the item you are dragging snaps and the remaining items move the equivalent distance.
- Snap now happens when resizing items using the mouse. As you resize any edge, it snaps to the closest horizontal or vertical line of the grid, or to the closest guideline if you resize the edge within a few pixels of the guideline. When resizing a selection of more than one item, the edge of the item snaps and the remaining items resize by the equivalent amount.
- We've added Smart Guide support to help snap and align items with each other more easily. A new menu item for **Smart Guides** has been added to the **Alignment** menu on the **LAYOUT** tab. **Smart Guides** are turned on by default. When you move or resize an item using the mouse while **Smart Guides** are turned on, you can align any edge of the item you are moving to any edge of other non-selected items on the current page. When **Smart Guides** are activated, they display an orange vertical or horizontal dotted line. As you drag or resize an edge of an item near another item on the page, you will also be able to feel it snap when it aligns with the other item.
- We have fixed the issue when snapping rotated items, so that MapInfo Pro uses the minimum bounding rectangle (MBR) of the rotating item to snap against.
- To temporarily override the snap behavior when Snap To Grid is enabled and the frame moves the number of pixels equal to the current grid increment, hold down Ctrl key while you use an arrow key; this will move the frame a single pixel each key press.
- Snap To Grid or Guidelines will only be active when performing direct manipulation of frames either using the mouse or the keyboard.

Layout Alignment

Use **Smart Guides** and improved snapping to align objects or snap them together quickly. Smart Guides work by snapping objects on the layout together as they move close together. You can use smart guides to align the edge of the item you are moving to the edge of other items on the current layout. This is turned on by default for a new Layout window.

To turn on smart guides for a Layout window:

1. On the **LAYOUT** tab, in the **Edit** group, from the **Alignment** list, select **Smart Guides**.

   When using this option, we recommend disabling **Snap To Grid**.

2. Select one or more layout frames (frame borders display to indicate your selections) and move them to their new position. The edges of the frame or item will align with the edges of any other frames nearby.

Smart guides display a visual cue (an orange vertical or horizontal guideline) when a Smart Guide is actively being used to snap items together.. The item automatically aligns (snaps) to the edge of nearby items as if there is a guide line. Smart guides include the border of an item, so that items visually align.

While using the left mouse to drag or resize an item, pressing and holding the Alt key temporarily disables all Snap to Grid and snap to guide behaviour. Releasing the Alt key enables these behaviours.

Zooming / Panning

- When zooming in/out using the zoom tool or mouse, the zoom operation is now centred on mouse location.
- Added **Fit Layout in Window** option in the Layout context menu to quickly zoom out to see the entire Layout.
- Hold down the middle mouse button to pan around the Layout.

Paper Margins

- Paper Margins now shown on the Layout so that you are aware of non-printable space.
- With **Smart Guides** on, you will be able to snap objects to the Paper Margins.

Frame Deactivation

- Map and browser frames can now be activated to edit live content directly from within a Layout.
- Deactivation of these frames can be done with either **Alt-Click** of the mouse or by clicking outside of the frame on the Layout.
- New Preference added to disable frame deactivation clicking somewhere on the Layout. On the **Backstage**, click **Layout Window** in the **Window** group to display the **Layout Preferences** dialog.

Raster Image Changes

32 BPP Raster Image Support

MapInfo Pro raster image support now includes the ability to load images using 32-bits per pixel (bpp) and honor per pixel transparency or translucency. This is also referred to as `alpha-blending`. This improves the appearance of image layers and maps. It is especially noticeable for **WMS** and **WMTS** servers that produce images with transparent backgrounds. Previously, the image was converted to 24 bpp on the fly and sometimes this resulted in the transparent pixels being displayed as black.

Raster Transparency Improvements

The raster transparency support has been extended to automatically detect transparency of an image background and still allow the user to select one more colors to make transparent in the image. This means that the Adjust Image Styles dialog will no longer disable the transparent color controls and the user can choose a color to make transparent in the image layer.

New MapBasic Tools

The following MapBasic tools have been ported or added to the 64-bit version of MapInfo Pro:

1. Ring Buffer Tool
2. Quick Search Tool
3. Layout Template Tool

Layout Designer Undo Redo

You can now undo and redo actions in the layout window.

Press **Ctrl+Z** , or on the **HOME** tab, in the **Clipboard** group, click **Undo** to undo a previous action.

Press **Ctrl+Y** , or on the **HOME** tab, in the **Clipboard** group, click **Redo** to revert.

Create Points Improvement

When a **Create Points** operation is completed, use the **Add to Map** option to open the result in a new map window or add it to an existing map window. This saves time and clicks as compared to going to Layer control and adding the layer. Available options are:

- Current Mapper - Open the table in the current Map window. This is selected by default.
- New Mapper - Open the table in a new Map window.
- No View - Open the table without viewing it (adds the table to the Table list in the Explorer window).

Data Editing - Reshape

While using the **Reshape** tool, if you click on something on a different layer or leave the **Reshape** mode accidentally and then return to the layer you are editing, **Reshape** mode persists. The layer will stay in **Reshape** mode until you turn it off.

Table Operations

Browsing results after updating columns

When using the **Update Column** command, the **Browse Results** check box will remember its setting for the duration of the session.

Open a table after saving a copy of it

- The **Save Copy As** dialog box now offers an option to open the table being saved.
- You can choose the **Preferred** view as well.

New Topmost property for Floating Windows

A floating window can now have a **Topmost** property in which it stays on top of other floating windows (and over any non topmost window including other apps). This property is available when floating in the title bar context menu along with **Dockable**, **Tabbed**, **Auto Hide** etc. This property is available for the following windows:

- Info (selected by default, would be Topmost when opened)
- MoveMapTo
- Statistics

- Ruler

Shortcut Keys

Snap

- Snap to grid using arrow keys has changed. When using the Up arrow, the top edge of the minimum bounding rectangle (MBR) for the selection of items snaps to the closest horizontal line of the grid above the selection. When using the Right arrow, the right edge of the selection MBR snaps to the closest vertical line of the grid to the right of the selection.
- To temporarily override snap while dragging or resizing items with the mouse, hold down the ALT key.
- To temporarily override snap while moving items with arrow keys, hold down the CTRL key. The CTRL moves selected items by one (1) pixel instead of snapping them to the grid.

Info

Press `Ctrl + Shift + I` to use the **Info** tool

Map

In a map window, pressing the `Esc` key changes the currently selected tool to the **Select** tool.

Changes to the Startup Preferences and Quick Start

All functionalities in the Quick Start dialog are now available in the **Welcome Window**. So, the Quick Start dialog has been removed from MapInfo Pro.

As a result of this change, the Startup Preferences dialog has been updated. The checkbox controlling display of the Quick Start dialog has been replaced with a checkbox to control the display of the Welcome Window.

Also, if you turn ON the Welcome Window, the MapInfoPro.wor workspace would not be automatically loaded and the checkbox to turn it ON in Startup preferences is also disabled.

Calculate Statistics Command

A new command `Calculate Statistics` has been added to the `TABLE` tab under the `Calculate` group. This command allows you to perform statistical calculations for a column in a table or query/selection.

Improvements to Legend Swatches

Multiple changes have been made to improve legends swatches. This includes various types of swatches (custom symbol, rectangular fills, etc.). Changes also include appearance on-screen, as well as when printing or exporting.

Custom Symbol Legend Swatches

Many of the raster images that are used as custom symbols (in the CUSTSYMB directory) are now drawn in a different way that improves the appearance of the images. This is especially noticeable

when an image is drawn at a smaller size than the original image. This should look better on-screen (in Layout or Legend windows), as well as when printed or exported.

Extra Border around Rectangle Fill Swatches when Printed

Previously, printing a Layout containing Legend swatches for fills and lines frequently resulted in blurry edge. Now the edges will be crisp.

Wrong Colors In Legend Swatches when Printed

Previously, sometimes the color of the legend sample did not look correct. This was due to smoothing. Now the smoothing has been turned off so the sample should look crisp and have the correct color when printed.

Viewing PDF Files containing Legend Frames in Adobe Acrobat

If you print a layout with legend frames, to PDF, you may need to adjust your Acrobat settings. This is especially relevant when using a custom symbol with Show Background turned on, or a fill swatch.

If you see a thin gray line around the edge of the legend swatch, you may need to turn off Image Smoothing in Acrobat. To do that, in Acrobat go to `Edit > Preferences > Page Display > Rendering > Smooth Images (uncheck).`

Layout Scalebar Unit Customization

You can now customize the units string shown in the layout scalebar. This helps in the case when you may want to produce a layout and show a unit name with an alternate spelling, such as "kilometers" vs. "kilometres".

The default unit naming convention has not changed. But if you wish to alter the units string, you can do so in the Layout Scale properties dialog during creation or you can modify an existing scalebar.

You can either click on the unit name shown below the scalebar sample, or click on the pencil icon to begin editing.

Note: If a scalebar has a customized unit name, the scalebar will not open in older versions of MapInfo Pro (version 16.0 or earlier).

Storing TAB, MAP, and ID files in same location as SHP files

When opening a SHP file in MapInfo Pro, you can now store the resultant TAB, MAP, and ID files in the same folder as input SHP file. In previous versions, this location used to be the SHP file directory preference (typically user's **Documents** folder) by default. Now this location automatically defaults to the same folder as the input SHP file.

However, there is a new folder icon in the location sidebar you can use to select the SHP file directory preference location instead. If folder location where SHP files reside is read-only, an error is displayed asking you to select another location.

Updates to Task Manager Preferences

The **Task Manager Preferences** dialog box has been updated to include the following options:

1. A new check-box to automatically show the task window when a background task is started, selected by default.
2. A new check-box to display an optional task ID in the task window list to help find the most recently run task in **Task** window; selected by default.

Changes and updates to the MapInfo Pro Ribbon

TABLE , MAP , and SPATIAL Tabs

1. In the **Selection** group, changed **SQL Select** button to a split button containing **SQL Select** and **Simple Select**.
2. In the **Selection** group, removed the **Quick Launch** button that previously opened the **Select** dialog.
3. Added shortcut **Ctrl+Shift+Q** for **SQL Select** dialog command.
4. Added shortcut **Ctrl+Shift+P** for **Simple Select** dialog command.

Map Tab

1. In the **Navigate** group, added a new **Change View** button to replace the quick launch control that opened the **Change View** dialog.
2. In the **Navigate** group, changed **Previous View**, **Move To**, and **Change View** to small button controls.
3. Added shortcut **Shift+V** shortcut to open **Change View** dialog
4. In the **Content** group, changed **Cosmetic** drop-down buttons to large button controls.
5. In the **Content** group, changed **Zoom To** drop-down buttons to large button controls.

Home Tab

1. In the **File** group, changed **Workspace**, **Save**, and **Close** split buttons to have large button controls.
2. In the **File** group, the **Save Copy As** button under the **Save** split button is now the first control in list instead of **Save** button which is not always enabled.

Quick Access Toolbar

1. In the **Quick Access Toolbar**, **Save Table** command is added as checked.

New Coordinate Systems and Projections

There are new datums in this version:

- Geocentric Datum of Australia (GDA 2020 Datum) #1028

For a detailed list of enhancements, see Coordinate System Enhancements by Version in MapInfo Pro Help.

Known Issues

MapInfo Pro version 17.0.3

Nordic Character Issues

While comparing Nordic characters when running MapInfo Pro, the results of string comparisons may vary. You need to be aware of your system's current Locale, for example, if your locale is Danish or da-DK:

1. If you start MapInfoPro.exe with the command line parameter: `/AppLocale=en-US`, then the Danish `Æ` is seen as an `A` and string comparisons will not work as expected. To resolve this, run MapInfo Pro in da-DK locale, (Set system user locale or use /AppLocale=da-DK).
2. When executing queries, with NATIVE tables only, if an index was not created in the da-DK locale, selections may not work with strings containing diacritics in the Nordic languages. These diacritics (for example, `PØSE`) will be treated same as `POSE` if index was not created in Danish (DA-DK) locale. To resolve this, run MapInfo Pro in da-DK locale, (Set system user locale or use /AppLocale=da-DK) and drop and recreate ALL the indexes. This will rebuild the index in the correct locale, and the selections will then work as expected treating these characters as different. This issue does not occur with NATIVEX (MapInfo Extended Tab) format tables.

MapInfo Marketplace JavaScript Errors

You might see some JavaScript errors when you open the MapInfo Marketplace Preview from within MapInfo Pro.

Workaround:

You can resolve this issue by adding a new DWORD entry to the following registry keys:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Internet
Explorer\Main\FeatureControl\FEATURE_BROWSER_EMULATION
```

```
HKEY_CURRENT_USER\Software\Microsoft\Internet
Explorer\Main\FeatureControl\FEATURE_BROWSER_EMULATION
```

Add a new DWORD entry `MapInfoPro.exe` with the following value data: `00002af8`.

License Server Issue

Permanent Borrowable licenses and Term Based Borrowable licenses do not work correctly on the same License Server.

MapInfo Pro version 17.0.1

Custom Projections file Overwritten

If you modified your mapinfow.prj file to add customized projections in MapInfo Pro version 17.0 (English), installing version 17.0.2 would overwrite your existing mapinfow.prj file resulting in loss of data.

Workaround: You are advised to backup your custom projections file before upgrading to MapInfo Pro version 17.0.2.

TAB is now a Keyword and not available for a Define name

You can no longer create a Define using the symbol TAB. TAB is now a keyword for MapBasic statements and compiling an MBX containing TAB in Define would result in a compilation error.

Workaround: Define TAB as TABe but existing applications that have this type of define might fail to compile now.

Spectrum Spatial Server error

When using a Spectrum Spatial server to geocode, you are not prompted to enter a User Id and Password. After setting `http://ssmipro-win16:8080/rest/GlobalGeocode` as default and clicking **OK** on the **Geocoding Server Information** dialog, the following error message appears:

```
Error occurred at geocoding server: Could not find country information
 to geocode.
```

Workaround: Enter random strings as User Id and Password even though they are not validated.

Certain Custom Installations not working correctly

MapInfo Pro does not delete any files installed in your `%appdata%` location. Also, we do not delete any registry entries created under the **Current User** while uninstalling MapInfo Pro or while doing custom installations.

Because of this certain custom installation scenarios involving the MapInfo Pro Tools do not work as they should, since the Tools files are copied to the user's `%aapdata%` location.

Issues with Non-Native TAB Files

If you use non-native TAB files (for example, DBF/TAB) as input files in the new Geocode tool, the **Create Points** option under the **Advanced Matching Options** is not selected by default. Also, the Process button on the **Geocode** dialog is disabled.

Workaround:

In order to write the geocoding results to a table, make sure you use a native tab format table. If you have already opened a non-native table like CSV, DBF, XLSX, etc., go to **Home > Save > Save Copy As** and check the box to automatically open the copy and geocode the native tab copy.

If you are opening a non-native tab format table, select the **Create copy in MapInfo** format for read/write check-box while opening the file in order to create a native table that can have the geocoding results written to it when it is geocoded.

Unable to Return License on Windows 10 version 10.0.17134

If your Windows 10 installation updates to version 10.0.17134 or beyond, you might not be able to return your MapInfo Pro licences. Trying to return your license via the automatic method displays the following error:

```
Unable to successfully reach the server" and user will not be able to
return license.
```

Workaround: If that occurs, we recommend you utilize the email method to transfer the license.

MapInfo Pro version 17.0.0

Issues with Location Intelligence Services and Proxy Servers

If your organization connects to the internet via a Proxy Server requiring authentication, MapInfo Pro's connectivity to Pitney Bowes' Location Intelligence services such as Geocoding and Drivetime Polygons may not work. There are known problems logging in and using those services. If you encounter an error which includes the error code 407 (Proxy Authentication Required) when logging in, you are experiencing this issue.

Note: If you are already authenticated and on the Proxy server (set on the **Control Panel/Internet Options**), you might not encounter this issue as you are already connected. There is no known workaround for this issue as of now.

Enabling GDA2020 datum transformation with NTv2

NTv2 conversion is available for use as a preferred method but the NTv2 Transformations are turned **OFF** by default. The use of the seven-parameter datum for GDA2020 (Datum #1028) is functionally equivalent, however if you require processing GDA2020 through NTv2 grid files then NTv2 can be enabled by editing the NTv2.xml file in the MapInfo Pro program directory.

```
<install directory>\NTv2.xml
```

1. Open this file in a Text or XML file editor and search for all occurrences of the following tag:

```
<NTv2 Conversion for Australia>
```

2. For each of these entries change the <Enabled> tag from **false** to **true** and save the file.
3. Launch MapInfo Pro and when doing datum conversions with Australian GDA94, AGD84, and GDA2020 datum tables, the conversions will be processed using the NTv2 grid shift files listed above.

Correcting a Microsoft .NET Framework 4.6.1 Installation Failure

MapInfo Pro installs .NET Framework 4.6.1. It displays the following error message when the .NET Framework is in a pending install state that requires an action before MapInfo Pro can finish installing.

> The installation of Microsoft .NET Framework 4.6.1 Full has failed. Setup will now exit.

This issue may be due to one or more of the following, all of which require a computer restart:

- The .NET Framework install may include an update, such as KB3102467, that requires you restart the computer and then rerun the MapInfo Pro install.
- On Windows 8.1 and Server 2012 R2, Microsoft .NET Framework 4.6.1 has a dependency on KB2919355 (April 2014). Install KB2919355 by downloading and installing it, or use Windows Update. Restart the computer and then rerun the MapInfo Pro install.
- A pending reboot on the computer blocks the .Net Framework 4.6.1 install. Restart the computer and then rerun the MapInfo Pro install.

Correcting a Hotfix KB3154527/KB3154528/KB3154529 Installation Failure

MapInfo Pro installs the hotfix KB3154527, KB3154528, and/or KB3154529. If a pending reboot on the computer blocks the hotfix installation, then MapInfo Pro displays the following message. Restart the computer and then rerun the MapInfo Pro install.

> The installation of ... Hotfix for Microsoft .NET Framework 4.6.1 appears to have failed. Do you want to continue the installation?

Correcting a MapInfo Pro Startup Issue

Installing the Microsoft Visual C++ 2015 Update 2 redistributable also installs KB2999226. If KB2999226 is not installed, then MapInfo Pro may close unexpectedly when you start it. To correct this, uninstall Microsoft Visual C++ 2015 Update 2, reboot the computer, and then reinstall Microsoft Visual C++ 2015 Update 2 redistributable.

Before taking action, Windows 8.1 or Server 2012 R2 users should also read the next section to determine which update is missing.

Correcting a MapInfo Pro Startup Issue on Windows 8.1 and Server 2012 R2

If MapInfo pro has difficulty starting on Windows 8.1 or Server 2012 R2, then you may be missing one or more of these updates:

- KB2919355 (required to install .Net Framework 4.6.1)
- KB2999266 (installs with Visual C++ 2015 Update 2)
- KB3012467 (installs with .Net Framework 4.6.1)

To check your machine for an update, on the **Start** menu select **Control Panel**. In the Control Panel window, select **Programs and Features** and then **View Installed Updates**. Search the list for the update, such as KB2919355.

If you do not have an update, then either use Windows Update to install it or search for it at **https://support.microsoft.com/en-us** and download it. Restart the computer and then rerun the MapInfo Pro install.

Use the Enhanced Explorer Window

We have enhanced the Explorer Window while adding support for **Individual Value** and **Graduated Symbol** thematic bins in the Layers list. Due to these changes, we have removed support for the separate Layers window. The recommendation is to use the **Explorer Window** instead of Layers. The Explorer includes the Maps (Layers) plus lists of the open Tables, Windows and Connections.

If you only want to see the Layers, you can hide the visibility of the other items in the Pro > Options > Explorer.

Progress and Resolution of Outstanding Issues

MapInfo Pro 17.0.3

Issue Number	Description and Resolution
MIPRO-84739	The background box would be drawn 90 degrees offset from the text while drawing text background box using vertical fonts (fonts starting with **@** in the font name) if enhanced rendering is turned on. **Resolution:** Fixed.
MIPRO-89875	The integrated mapping samples, if built to a custom directory, are unable to find the files they need from the MapInfo Pro installation directory, even if the DLL files listed in sample's ReadMe.txt are correctly pointing to the MapInfo Pro installation directory. **Resolution:** Fixed.
MIPRO-94617	MapBasic Tools using the `Alter ButtonPad` command do not run. **Resolution:** Fixed.
MIPRO-99631	In GELink Tool, if the OS Number setting uses commas for decimals and periods for digit groupings, then GELink output is incorrect, and points end up at wrong locations. **Resolution:** Fixed.
MIPRO-100063	Error when using WMTS with MapBox. **Resolution:** Fixed.
MIPRO-101822	De-selection speed redraws are slow while working with Workspaces containing multiple Mappers/Layouts. **Resolution:** Fixed.
MIPRO-104218	Exporting the a Tab file using the GELink Tool, outputs an incorrect KML file. **Resolution:** Fixed.
MIPRO-104931	**Selection>Find >Mark** button is disabled after printing map with raster layer. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-105055	A layout designer having a map frame with a raster image, if exported to PNG results in unexpected anti-aliasing and larger PNG file size than in a 32-bit version of MapInfo Pro with a classic layout window. This happens even though the map frame had no image smoothing (or enhanced rendering is turned off). **Resolution:** Fixed. Now anti-aliasing is not applied to the output image unless the **Use Anti-aliasing** check box is specified in the **Save Window As** dialog.
MIPRO-106271	Distortion with Japan Geodetic System conversions. **Resolution:** Fixed.
MIPRO-106981	Using a comma as a separator causes an error in exporting to KML using the GELink Tool. **Resolution:** Fixed.
MIPRO-107030	Running an Add-in like GELink is markedly slower than in earlier versions. **Resolution:** Fixed.
MIPRO-107047	District cell contents gets corrupted when Symbol is changed in the Districts browser. **Resolution:** Fixed.
MIPRO-107496	While deleting nodes if the **Move Duplicate Nodes** preference is turned on and the editable layer is also included in the map as an additional selectable layer, extra nodes would be deleted. **Resolution:** Fixed, only nodes from the editable layer are deleted.
MIPRO-108505	When batch exporting or printing Layouts with Maps having labels from a MapBasic program, the labels are intermittently missing from the output. **Resolution:** Fixed.
MIPRO-108528	When batch exporting or printing Layouts with Maps having labels from a MapBasic program, the labels are intermittently missing from the output. **Resolution:** Fixed.
MIPRO-108614	When attempting to load a 32-bit DLL from MapBasic using a 64-bit version of MapInfo Pro, an error appears stating that the DLL wouldn't load because it is not a 32-bit library. The error should say that it's not a 64-bit library. **Resolution:** Fixed.

Issue Number	Description and Resolution
	This has been corrected and the error now says: `Unable to load <DLL name> because it is not a 64-bit library.`
MIPRO-108692	When using FME tables only, and setting custom browser fields within **Pick Fields** dialog, and then saving as **Default Browser View**, MapInfo Pro would unexpectedly close while deleting the contents of the TAB file. **Resolution:** Fixed.
MIPRO-108932	Inserting a new point into table in the Malaysia BRSO GDM2000 Datum with valid X, Y values is creating the point at wrong location. **Resolution:** Fixed.
MIPRO-109456	On assigning an ICommand to a ToolButton in an addin, CanExecute method of the command would not execute. **Resolution:** Fixed.
MIPRO-109478	Explorer causes a fatal exception when displayed in an integrated WinForms application. **Resolution:** Fixed.
MIPRO-109786	**Custom Symbol** dialog sometimes disables **Show Background** for 32bpp images **Resolution:** Fixed.
MIPRO-109789	In WMTS, an error occurs on loading a layer with API key. **Resolution:** Fixed.
MIPRO-110036	MapInfo Pro would unexpectedly close when calling the `ConnectObjects()` function when a line with two equal points is passed to it (e.g.: zero-length). **Resolution:** Fixed.

MapInfo Pro 17.0.2

Issue Number	Description and Resolution
MIPRO-39674	Cloning a map into Layout using the **Clone View** command does not clone any layers that are not persisted in WOR. **Resolution:** Fixed.
MIPRO-75853	`Time` Field in MapInfo Pro table is converted to an `Integer` Field in a **GPKG** table and contents in the **GPKG** table are no longer usable as `Time` fields. **Resolution:** Fixed.
MIPRO-84012	If you load a saved Workspace containing a map in Layout and then close it, a Save Changes prompt is displayed even when no changes are done to the Workspace. **Resolution:** Fixed.
MIPRO-89631	When exporting a map object to KML via the **Google Earth Utility** tool, the object is created in an incorrect location as observed when the **KML** is opened in Google Earth. **Resolution:** Fixed.
MIPRO-90521	Using the **Snap/Thin** function on a cosmetic layer containing objects copied from a table results in an error. **Resolution:** Fixed.
MIPRO-91553	In the **Open Workspace** dialog, the default file-type is Workspace (*.wor,*.mws). This changes to MapInfo (*.tab) when you click on any of the MapInfo Places like, Tables Directory, Remote Tables Directory, etc. **Resolution:** Fixed.
MIPRO-96804	On opening a table from the Welcome Window, and then opening another table via the MapInfo Pro Interface, last directory used is not remembered. **Resolution:** Fixed.
MIPRO-98242	MapInfo Pro closes unexpectedly while changing Font Size with Map **Mini Toolbar**. **Resolution:** Fixed.
MIPRO-100016	Concurrent licenses are being released automatically after 2 hours. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-100090	While performing a query on a query, the new query is not saved to the workspace resulting in a Workspace Legend error. **Resolution:** Fixed.
MIPRO-101295	Size of fonts for the same font size in Layout Scalebar text are smaller than in Text Frames. **Resolution:** Fixed.
MIPRO-102482	MapBasic Tools using the `Alter ButtonPad` command do not run. **Resolution:** Fixed.
MIPRO-102590	In certain cases, MapInfo Pro closes unexpectedly after selecting a row in **Browser** window. **Resolution:** Fixed.
MIPRO-102997	WMTS causes MapInfo Pro to freeze for a long time and displays no tiles. **Resolution:** Fixed.
MIPRO-103177	In certain cases, using the **Find** command closes MapInfo Pro unexpectedly. **Resolution:** Fixed.
MIPRO-103184	**Copy/Paste** and **Drag Map** tool don't clone ad-hoc query layers when pasting or dropping into same session of MapInfo Pro **Resolution:** Fixed.
MIPRO-103186	Objects are not displayed after insert or commit operations on a table in the Citrix environment or when using shared tables on network **Resolution:** Fixed.
MIPRO-103598	Operations that do not display the **Data Aggregation** and **Data Disaggregation** dialog change the saved value of the dialog's **No Data** setting. **Resolution:** Fixed.

MapInfo Pro 17.0.1

Issue Number	Description and Resolution
MIPRO-101097	When doing a postal code level geocode or find address, the values for the fields returned in the response were not being populated which resulted in no records being geocoded. **Resolution:** Fixed.
MIPRO-100358	Data is lost while editing in browser when .NET version 4.7 is installed. **Resolution:** Fixed.
MIPRO-99941	The **All Others** category in the thematic bins shown in the **Layers** list of the **Explorer** window is visible even if the bin has no items. This category will now automatically show/hide depending if the bin has any items. If **All Others** has any items, it will be shown in the Explorer. If All Others does not have any items, it will not be shown in the Explorer. Other bin categories will always be shown regardless of whether they contain any items or if they are shown in the legend. **Resolution:** Fixed.
MIPRO-99937	Custom Symbols with no background are no longer drawing correctly. **Resolution:** Fixed.
MIPRO-99774	Degradation of WMS image quality in Layout Designer. **Resolution:** Fixed.
MIPRO-99688	Loading a MapBasic tool for the first time adds a menu into the **LEGACY** tab. Closing the tool removes this menu but reloading the tool fails to add the menu again in the **LEGACY** tab. **Resolution:** Fixed.
MIPRO-99653	Custom thematic templates from previous versions copied in thematic templates directory are not loading. **Resolution:** Fixed.
MIPRO-99338	*LargeInt* columns uploaded to RDBMS are treated as *Float* when opened in MapInfo Pro. **Resolution:** Fixed.
MIPRO-96181	MapInfo Easyloader is converting blank strings to NULL. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-94509	When a layer global style override is using stacked styles and you use MapBasic to remove one or more of the style passes, the stacked style dialog launched from the layer in the **Explorer** is showing the removed styles although the map is rendering the correct stacked style. **Resolution:** Fixed.
MIPRO-89896	While editing range labels for raster legends when changing a range label so that it no longer represents a valid range with a begin and end value, the label would still show the "to" string. **Resolution:** Fixed.
MIPRO-84177	Unsupported data type *uniqueidentifier* from SQL Spatial DB. **Resolution:** Fixed.

MapInfo Pro 17.0

Issue Number	Description and Resolution
MIPRO-51961	Orientation of objects drawn on a map changes while Zooming-In. **Resolution:** Fixed.
MIPRO-55490	On the **Browser** window, the **Clear Filter** context menu is disabled on a filtered column. **Resolution:** Fixed.
MIPRO-59789	Zooming into the map with **Image Reprojection** enabled results in the raster and vector images being unsynchronized. **Resolution:** Fixed.
MIPRO-63952	Text boxes in the **Layout Designer** window have an extra line that you cannot get rid of. **Resolution:** Fixed. The default size of a text frame is now smaller.
MIPRO-66119	Geocoding a large table using Mapmarker Geocoder results in a memory leak. **Resolution:** Fixed.
MIPRO-68621	SHP files are being created with UTF char-set. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-71386	On the **Browser** window, the **Clear Filter** context menu is disabled on a filtered column. **Resolution:** Fixed.
MIPRO-74493	Floating Info Tool window loses visibility behind a floating Map or Browser window. **Resolution:** Fixed. Now you can set it to be Topmost window and always visible.
MIPRO-75354	If a map in layout is activated and a scalebar is added to it, selecting Remove from Scalebar context menu is not removing it. **Resolution:** Fixed.
MIPRO-79274	When working with the Feature Manipulation Engine (FME) an "Invalid Input" error displays when converting DWG with the **Explode Blocks into Entities** option turned off. **Resolution:** Fixed.
MIPRO-79932	MapCAD does not correctly create Orthogonal Polygons using an MBX. There is an issue creating to only right angles when using the **Ctrl** key. **Resolution:** Fixed.
MIPRO-84152	Auto labels remain visible even when the ranged theme bin has visibility turned off. Earlier versions of MapInfo Pro would display range theme bins in the **Layer Control** window. When auto labels were on for the reference layer and a theme bin was not displayed, because its bin is unchecked and the reference layer is not visible and/or the theme has **Replace layer Style** turned on, then the labels for the non-visible objects would still display. **Resolution:** Fixed. If the map feature is not drawn then its auto label is also not drawn.
MIPRO-84527	Legend Swatches: Legend colors not matching map when printing to PDF **Resolution:** Fixed.
MIPRO-87158	Oracle spatial views are not allowing polyline inserts. The following error displays when attempting to insert a polyline into an Oracle View. "Oracle Error: ORA-32575: Explicit column default is not supported for modifying views. Operation canceled." **Resolution:** Fixed.
MIPRO-87647	MapInfo crash when executing the polyline split at node operation. This happens after selecting the polyline from a query table that has less fields than the base table.

Issue Number	Description and Resolution
	Resolution: Fixed.
MIPRO-88188	Layout Scalebar button is disabled when a map window is changed between Floating and Tabbed window states. **Resolution:** Fixed.
MIPRO-88282	Affine projection is lost when saved to the Geopackage format. **Resolution:** Fixed. Tables that use an Affine CoordSys can now be saved to Geopackage format.
MIPRO-88640	Browsing tables is slow in the 64-bit version of MapInfo Pro 16.0 compared to the 32-bit version. It may take a few seconds on Windows 7 and much longer on Windows 8.1 and 10. **Resolution:** Fixed.
MIPRO-88947	MapInfo Pro closes unexpectedly while opening a new workspace and attempting to create a new layout. **Resolution:** Fixed.
MIPRO-88979	While using WMTS server, changing a Tile Set from WMTS Table Properties results in a 403 Forbidden error. **Resolution:** Fixed.
MIPRO-89032	Rounded rectangles are not converting correctly from workspaces (WOR files) that include an older legacy layout. **Resolution:** Fixed.
MIPRO-89312	**Floating Ruler Window** Should be on Top when Map(s) set to Floating **Resolution:** Fixed. Floating Ruler Window now shows on the top once set to front window
MIPRO-90283	WMS and Envinsa Geocoding not working when connecting via proxy server. **Resolution:** Fixed.
MIPRO-90560	An error occurs when making an Oracle tables mappable that has mixed case coordinate field names. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-91351	When using different regional settings, MapInfo Pro displays the error, "Layout Designer Grid Size must be greater than zero". **Resolution:** Fixed.
MIPRO-91505	Customize Ranges window does not adjust Columns to fit all digits. **Resolution:** Fixed.
MIPRO-91584	Text object value is incorrect using Map File Application Language (MFAL) 16.0 or higher. The string in the text objects that MFAL returns is not correctly null terminating. **Resolution:** Fixed.
MIPRO-91993	The **Layout Designer** window closes unexpectedly when adding a map frame. This occurs when running a MapBasic application (MBX) and then adding a map frame. **Resolution:** Fixed.
MIPRO-92406	Issues using CTRL + shortcuts after closing a table using the `Close All` option with Explorer window open. **Resolution:** Fixed.
MIPRO-92506	Incorrect tooltip is displayed for the `Pan` Tool in the `Edit` group on the `LAYOUT` tab. **Resolution:** Fixed.
MIPRO-92648	The Ruler tool, on the custom AddIn tool bar, does not display the Ruler window. **Resolution:** Fixed.
MIPRO-93241	The following error occurs while loading a Tile Server Table: `Error parsing a Tile Server URL in WMTS Table.xml. Unable to open table Untitled.` **Resolution:** The URL for fetching the tiles was not being correctly formed. This is Fixed now.
MIPRO-93544	MapInfo Pro closes unexpectedly if you add a large number of ribbon items. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-93853	Legend Swatches: Grey box in PDF around legend symbols. **Resolution:** Fixed.
MIPRO-93897	While committing data with macrons to SQL Server 2012, the macrons are discarded after refreshing the tables. **Resolution:** Fixed.
MIPRO-94038	Bing Roads and Hybrid base maps are missing certain roads. **Resolution:** Fixed.
MIPRO-94191	MapInfo Pro closes unexpectedly while executing an SQL query with missing double quotes in the WHERE clause. **Resolution:** Fixed.
MIPRO-94716	While using the MapBasic command `Create Text`, the text appears truncated if the (X2/Y2) coordinates are not provided. **Resolution:** The `Create Text` statement has slightly different behavior now (as of version 16.0.3) if it is created into a legacy Layout. If a legacy Layout is created in an MBX or WOR, the X2/Y2 parameters will be ignored and the text frame will be auto-sized when the Layout is converted to a Layout Designer. If a Layout Designer is created in an MBX or WOR, the X2/Y2 parameters will be honored and the text frame will be sized based on those values when created in a Layout Designer. As of version 16.0.3, the X2/Y2 parameters are optional, and if left out, the text frame will be auto-sized when created in a Layout Designer.
MIPRO-94719	`ForegroundTaskSwitchHandler` procedure is not working. **Resolution:** Fixed.
MIPRO-94767	Using `CreateObject` from a VBS or VBA script to connect to MapInfo Pro resulted in unexpected behaviour. **Resolution:** Fixed.
MIPRO-94817 MIPRO-95915	ECW image files having Cyrillic characters in the filename could not be opened. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-94990	Custom Ribbon Tool Buttons are not highlighted when selected. **Resolution:** Fixed.
MIPRO-95351	An error occurs when executing `Polyline Split at Node` operation. **Resolution:** Fixed.
MIPRO-95558	Opening a new workspace and then trying to create new a layout results in MapInfo Pro closing unexpectedly. **Resolution:** Fixed.
MIPRO-95752	Duplicate records are created in the DBMS table when edited using the `Info` tool and saved. **Resolution:** Fixed.
MIPRO-95791	In the **Browser** window, after sorting upon a column, browser focus returns to the left most column instead of the column that was sorted. **Resolution:** Fixed.
MIPRO-95804	Ribbon tab switching set to **None** in the **Preferences** window is not working as expected for Custom tabs. **Resolution:** Fixed.
MIPRO-95912	Labels are displayed even with visibility and bin turned OFF for a layer. **Resolution:** Fixed.
MIPRO-96056	Not able to Show/Hide Layout page thumbnail pane. **Resolution:** Fixed. Single page layouts will now open with the thumbnail pane collapsed. Multi-page layouts will open with the thumbnail pane visible. As long as the thumbnail pane is not resized by dragging the grid splitter, the layout will auto hide thumbnails when the layout has only a single page, and will auto show thumbnails when the layout has more than one page. Once the thumbnail pane is resized (even if it is completely collapsed) the layout will honor that and no longer auto show/hide thumbnails as pages are added or removed.
MIPRO-96057	Layout Scalebar button is disabled if a map is added to an empty frame in a layout. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-96101	In Layout Designer frames, content once removed using the `Remove Content` option cannot be restored. **Resolution:** Fixed. Layout frames now support undo/redo when Removing Frame Content or Adding Content to an empty layout frame. If the operation cannot be undone, a confirmation message will be shown. Legend frames and Custom frames are do not support undo/redo when removing or adding frame content.
MIPRO-96149	Map Objects are lost after if you delete the corresponding records and save the Access table. The Map Objects are not available when you reopen the Access Table. **Resolution:** Fixed.
MIPRO-96163	LayoutCommandID : existing command IDs changed from previous release **Resolution:** Fixed. Restored command IDs for Layout commands to previous values.
MIPRO-96164	Samples for solid fill patterns in Legend in Layout frame do not print well **Resolution:** Fixed.
MIPRO-96182	Bing server gave an error when below a certain zoom level instead of showing the "no imagery" tile background **Resolution:** Fixed.
MIPRO-96194	While using WFS 2.0.0, the `DescribeFeatureType` request is failing. **Resolution:** Fixed.
MIPRO-96202	Opening workspaces is taking longer with Addins loaded in MapInfo Pro. **Resolution:** Fixed.
MIPRO-96203	Selected Nodes should remain the same color (yellow) whether layer is enhanced or not. **Resolution:** Fixed.
MIPRO-96378	Clicking the **Layout** button in the **Windows** group, under the **HOME** tab does not open the Layout Templates gallery. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-96382	Tools are being installed to user roaming profile location. **Resolution:** Fixed. Tools are now installed to the user local profile location.
MIPRO-96461	Inserting records into a table with Fastedit enabled takes a long time. **Resolution:** Fixed.
MIPRO-96487	Menu + Keyboard Shortcuts are not working. **Resolution:** Fixed.
MIPRO-96593	Unable to export Theme Legend Window. **Resolution:** Fixed.
MIPRO-96628	In MapInfo Pro Runtime backstage, all buttons are not available in the old **Preferences** dialog. **Resolution:** Fixed.
MIPRO-96664	List view of the Info Tool window truncates the displayed value of the column data to 31 chars. **Resolution:** Fixed.
MIPRO-96900	Cannot copy a single cell from Browser when table is Read-only. **Resolution:** Fixed.
MIPRO-96973	There is no way to distinguish between a stand-alone window or a map frame in the layout in the Explorer window. **Resolution:** Fixed. Now each map node in the Explorer window will show an icon to identify if the map window is a stand-alone window or a map frame in the layout.
MIPRO-98023	In Layout Designer, it is difficult to center text frames with respect to other frames. **Resolution:** Fixed.
MIPRO-98091	In Layout Designer, working with the Selection Frame is difficult when Zoomed-in. **Resolution:** Fixed.
MIPRO-98327	The Quick Access Toolbar customization was missing commands. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIPRO-98361	Close All button on then Quick Access Toolbar does not prompt to save data changes. **Resolution:** Fixed.

MapInfo Pro Advanced

What's New in MapInfo Pro Advanced

This section provides a brief description of important features and enhancements made to MapInfo Pro Advanced.

MapInfo Pro Advanced version 17.0.3

In this release we have made several changes to the existing raster features. For a summary, see **MapInfo Pro Advanced version 17.0.3** on page 54.

MapInfo Pro Advanced version 17.0.2

MapInfo Virtual Raster

MapInfo Virtual Raster is a raster that acquires the data for its field and bands from other raster sources at run time. The virtual raster is described by an XML file that records the structure of the raster (the field, its bands and properties). The XML also records the raster file sources from which the raster data is acquired to populate the field and bands.

MapInfo Virtual Raster behaves like an actual raster file, even though it does not exist physically. It gives you the same experience as any physical raster file. A virtual raster has the following advantages:

- A virtual raster can be rendered in either pseudo or RGB mode. In the RGB mode you can map individual R, G, and B bands from different raster sources.
- Virtual raster is useful for managing large datasets that are split into multiple files. A virtual raster is just an XML file that contains raster field and band structure and mapping of input data sources. The raster source provides data to the virtual raster driver on demand.
- There is no restriction on the cell size, geometry or projection of the source raster. If the input raster source has multiple fields and bands, you need to specify the desired field and band index of the source raster.
- A virtual raster driver allows you to visualize your desired raster using multiple input data sources on the fly, without processing the input data source. For raster sources like ECW or JPEG2000, virtual raster is more useful because any processing operation on rasters with lossy image compression results in further loss of image quality. It also saves processing time.

Creating a Virtual Raster

Follow the steps below to create a virtual raster.

1. On the **RASTER** tab, in the **Operations** group, click **Raster Operations** and then click **Virtual Raster**  icon to open the **Virtual Raster** dialog box.
2. **Input** - Select an input raster from the **Input File** drop-down list or browse to a file location to open the input raster. Then click the drop-down list and select the check box against the raster that you want to include in the virtual raster.
3. **VRT Creation Options** - Specify output raster's field and band structure. You can edit a field/band name by typing a new name in the respective field/band name box. To modify the output structure you can remove a field or band. Click the  button to remove a field or band. Click the drop-down list to select a band. The drop-down list derives the bands from the input raster file.
4. If required, select the **Record Relative Path** check box, to record the relative path in the XML output.
5. **Output** - In the **Output File** box enter the name you want to specify for your output XML file. Click to browse to the location in your computer to save the XML file.

The output XML

MapInfo Virtual Raster tool creates an XML output file. This XML file records all information about the component raster and the virtual raster driver reads the information described in the XML and renders it on the map.

A simple virtual raster output might look like this:

```
<?xml version="1.0" encoding="utf-8"?>
<VirtualRaster>
  <Raster File="D:\Data\All\grc\SeattleLULC.grc" Name="RasterSource0" />
  <Raster File="D:\Data\All\Virtual Raster test\Classified\Classified.grc" Name="RasterSource1" />
  <Raster File="D:\Data\All\Virtual Raster test\grd\SeattleElevation.grd" Name="RasterSource2" />
  <RasterInfo>
    <FieldInfo Name="Field">
      <BandInfo Name="Band 1">
        <Raster Name="RasterSource0" Field="0" Band="0" PrimaryRaster="true" />
      </BandInfo>
      <BandInfo Name="Band 2">
        <Raster Name="RasterSource1" Field="0" Band="0" />
      </BandInfo>
      <BandInfo Name="Band 3">
        <Raster Name="RasterSource2" Field="0" Band="0" />
      </BandInfo>
    </FieldInfo>
  </RasterInfo>
</VirtualRaster>
```

By default the absolute path is recorded in the output XML file; however, you can choose to record the relative path.

In case of relative path, the output XML file will be created in the same folder as the input raster source file.

Note: It is recommended that all input raster sources and virtual raster output XML file reside in a single directory.

Structure of the output XML file

The output XML file lists all the input raster data sources to this virtual raster. In addition to file path, each source raster has a unique alias name. This alias name is auto-generated, for example 'RasterSource0, 'RasterSource1' etc. as shown below.

```
 <Raster File="D:\Data\All\grc\SeattleLULC.grc" Name="RasterSource0"/>
 <Raster File="D:\Data\All\Classified\Classified.grc"
Name="RasterSource1"/>
 <Raster File="D:\Data\All\grd\SeattleElevation.grd"
Name="RasterSource2"/>
```

- The **RasterInfo** tag will have a single **FieldInfo** tag. The **FieldInfo** tag has an attribute 'Name' which will define the field name for the Virtual raster. The **FieldInfo** tag can contain one or more **BandInfo** tags.

```
<RasterInfo>
 <FieldInfo Name="Field">
  <BandInfo Name="Band 1">
   <Raster Name="RasterSource0" Field="0" Band="0" PrimaryRaster="true"/>

  </BandInfo>
  <BandInfo Name="Band 2">
   <Raster Name="RasterSource1" Field="0" Band="0"/>
  </BandInfo>
 </FieldInfo>
</RasterInfo>
```

- Each band is mapped to a named source raster. Specify the field index and band index of the data you want to extract from that source raster for the virtual band. Bands can be designated a 'Name'. One of the bands can be marked as Primary Raster. The properties of the raster referred to by Primary Raster band will be used to define the virtual raster's properties, such as the coordinate system, geometry and the cell size. The primary raster will have a yellow star beside it.

```
<BandInfo Name="Band 1">
 <Raster Name="RasterSource0" Field="0" Band="0" PrimaryRaster="true"/>
</BandInfo>
<BandInfo Name="Band 2">
 <Raster Name="RasterSource1" Field="0" Band="0"/>
</BandInfo>
```

MapInfo Pro Advanced version 17.0.0

Align - Matching the geometry of one raster with another raster

In this release of MapInfo Pro Advanced, we have added the Align tool to snap one raster with another raster so that the geometry of both rasters become same.

On the **RASTER** tab, in the **Operations** group, click **Operations** and then click **Align** button to open the **Align** dialog box.

To align, we need two raster files - the input raster and the primary raster. The input file is the raster that you want to align and the primary raster is the raster to be used as reference. When we align two rasters, we match the geometry of one raster with another raster.

Warp Image - Georeferencing a Scanned Map

The scanned maps do not contain spatial reference information. MapInfo Pro Advanced allows you to georeference a scanned map using the **Warp Image** tool. Image warping is a process of georeferencing a scanned map by applying a transformation to the image. This tool can be used for georeferencing raw image data, old scanned images or maps.

On the **RASTER** tab, in the **Operations** group, click **Raster Operations** and then click **Warp Image** button to open the **Warp Image** dialog box.

The Warp Image can also be used to register two different images taken of the same geography at different times.

Polygonise - Converting a Raster into Polygon features

The Polygonise tool added in this release takes a raster as an input and joins adjacent cells having same cell value to form vector features and outputs into a MapInfo TAB file. The output TAB file will contain the polygon information.

On the **RASTER** tab, in the **Operations** group, click **Raster Operations** and then click **Polygonise** button to open the **Polygonise** dialog box.

The polygonise tool provides various methods to create polygons from a raster. Polygons are created by joining input raster cells with certain properties such as Same Value Cells, Valid\invalid Cells, Raster Extent and User Defined.

It discards all null cells. If there are scattered cells in the input raster individual polygons are created.

Export a Map as Raster Image

There may be instances when you want to save a rendered raster at a particular zoom level as an image. The **Export Image** tool allows you to export a map that you have created, as an image file. This image file will not be a static image, it will be a georeferenced image. You can use this image in other graphics programs or platforms.

On the **RASTER** tab, in the **Operations** group, click **Raster Operations** and then click **Export Image** button to open the **Export Image** dialog box. You can set the following properties.

Resolution Ratio - You can choose either High or Low resolution image in the output.

Convert To - When saving the raster as an image, you can choose a format such as .tiff, .mrr, .bil, .bip. or .bsq from the list.

Enhancements and Updates in MapInfo Pro Advanced

This section summarizes enhancements made to the existing raster features.

MapInfo Pro Advanced version 17.0.3
Improvements to the Warp tool

Affine Transformation Based on Ground Control Points

Affine transformation is a linear transformation which combines translation, scaling, rotation and shearing. Affine transformation is commonly used in GIS to transform maps between coordinate systems. For example, you can use this transformation to adjust from an unknown coordinate system such as a local Mine Grid to UTM. We have improved Affine transformation for warping by allowing you to use Ground Control Points.

In this release we have added the ability to perform Affine transformation based on Ground Control Points. With this addition, now you can use Affine transformation in any of the following ways:

- By using 3 or more control points from which MapInfo Pro can analytically derive the best transform type with minimum error.
- By providing 9 matrix transformation parameters, which are used to define the affine transformation coefficients.
- By directly providing 6 Affine Coefficients (A to F).

Ability to Produce Output in MapInfo Virtual Raster (.mvr) Format

Georeferencing is the process of mapping each pixel of the raster to real-world coordinates. It can be achieved by manually defining a linear transformation between pixel and world coordinates. A Ground Control Point (GCP) is a coordinate pair that links a pixel location in the raster with the real-world coordinates.

Earlier, the Warp Image tool applied transformation to produce raster in formats like MRR and GeoTIFF. Now, the Warp tool has been improved to create output in a MapInfo Virtual Raster (.mvr) format. MapInfo Virtual Raster contains all the transformation data and can be displayed in MapInfo Pro in the normal way. The warp is applied on the fly, providing you a way to preview the warp operation without actually executing it. This raster can then be consumed in other processing tools.

If you wish to use the raster outside of MapInfo Pro, you can output in a standard format like GeoTIFF.

If you want to create a virtual raster, you need to specify an interpolation method.

- **Nearest Neighbor** — This is the fastest resampling method. It minimizes changes to pixel values. Nearest Neighbor is suitable for discrete data, such as land cover.
- **Bilinear** — Calculates the value of each pixel by averaging (weighted for distance) the values of the surrounding 4 pixels. This is used for continuous data.
- **Cubic Spline (Local, Global)** — It considers the closest 4x4 neighborhood and calculates the value of each pixel by fitting a smooth curve based on the surrounding 16 input pixels. Cubic Spline produces the smoothest image but it can create values outside of the range found in the source data. It is suitable for continuous data.
- **Default** - It applies the best interpolation method applicable for resampling the data.

Note - For a virtual raster the supported output formats are .xml and .mvr only.

Point Inspection Enhancement

Support for Multi-field-band file in Point Inspection

The Point Inspection tool enables you to create an output vector file having grid values for input vector points. You can either create a new TAB file or update the existing column(s) of the input TAB file.

When analyzing points in a multi-field-band file, the Point Inspection tool now lets you select the field and band in a multi-field-band .mrr file. This feature gives you more control on analyzing an .mrr file.

You can also specify a value for the null-cell and no-cell.

We have improved the grid also for field-band mapping.

Raster Preferences Dialog Box Enhancement

MapInfo Pro Advanced supports various Raster formats. There are two categories of drivers - the Native drivers and GDAL file format drivers listed under the **Raster Format** tab in the **Raster Preferences** dialog box.

- **Native Formats** - This table lists all raster formats that will be opened by their native drivers in MapInfo Pro Advanced.
- **GDAL Formats** - This table lists all raster formats that you can open using GDAL driver in MapInfo Pro Advance. Ensure **GDAL Multi-Format Driver** is enabled for processing and display from the **Native Formats** tab.

You can load or unload a driver from the **Raster Preferences** dialog.

New Additions in the Native Formats List

We have made the following additions in the **Native Formats** list.

Table 2:

Additions in the Native Formats list	Description
MapInfo Virtual Raster (MVR)	This driver supports MapInfo Virtual Raster file format.
MapInfo (Version 16) Multi-Resolution Raster (.mrr)	Use this driver if you are creating a Classified Multi-Resolution Raster (MRR) file. This driver supports backward compatibility which means the Classified MRR created using this driver can be opened in MapInfo Pro 16.0 and earlier versions. It is recommended to create all other field types (Continuous, Imagery and Image Palette) of MRR using **MapInfo Multi-Resolution Raster (.mrr)**driver because they are compatible with 16.0 and earlier versions, except the Classified MRR.

Additions in the Native Formats list	Description
	Therefore, if you need to open a Classified Multi-Resolution Raster (MRR) file you should use **MapInfo (Version 16) Multi-Resolution Raster (.mrr)** driver in place of **MapInfo Multi-Resolution Raster (.mrr)** driver.
GDAL (Multi-format Driver)	It controls loading and unloading of GDAL file formats. It should be always **ON** to load or unload a specific GDAL format from the **GDAL Formats** tab. If this driver is unchecked under **Native Formats** tab, you can not load any GDAL format from the **GDAL Formats** tab.
Render Algorithm	This is an internal driver which will be used in our new rendering engine in a future release.
MapInfo Point Storage (.mrrpnt)	This is an internal file format which is used in interpolation methods. It should be always **ON**.

GDAL Formats

How to add a new GDAL format:

1. Navigate to `C:\Users\%USERNAME%\AppData\Roaming\MapInfo\Raster\400\`, where 400 denotes the Raster version.
2. Open MIRasterPreferences.xml, in any text editor.
3. In the GDAL Driver section add a new line for your format. For example, to add a .jp2 format add a line as displayed below:

```
<format desc="JPEG2000 (.jp2)" ext="jp2" GDALCode="JP2ECW"
ProcessingEnabled="true" RenderEnabled="true"/>
```

```
<Driver Type="GDAL" RestrictFormats="true">
  <Formats>
    <format desc="ENVI .hdr Labelled Raster" ext="dat" GDALCode="ENVI" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="First Generation USGS DOQ (.doq)" ext="dem" GDALCode="DOQ1" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="New Labelled USGS DOQ (.doq)" ext="dem" GDALCode="DOQ2" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="Military Elevation Data (.dt0)" ext="dt0" GDALCode="DTED" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="Military Elevation Data (.dt1)" ext="dt1" GDALCode="DTED" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="Military Elevation Data (.dt2)" ext="dt2" GDALCode="DTED" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="GeoTiff (*.tif)" ext="tif" GDALCode="GTiff" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="GDAL Virtual Raster Dataset (.vrt)" ext="vrt" GDALCode="VRT" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="ERDAS Enhanced Compressed Wavelets (.ecw)" ext="ecw" GDALCode="ECW" ProcessingEnabled="true" RenderEnabled="false"/>
    <format desc="ASCII Gridded XYZ (.xyz)" ext="xyz" GDALCode="XYZ" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="Surfer Binary Grid (.grd)" ext="grd" GDALCode="GSBG" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="ArcInfo ASCII Grid (.asc)" ext="asc" GDALCode="AAIGrid" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="ERMapper (.ers)" ext="ers" GDALCode="ERS" ProcessingEnabled="true" RenderEnabled="true"/>
    <format desc="JPEG2000 (.jp2)" ext="jp2" GDALCode="JP2ECW" ProcessingEnabled="true" RenderEnabled="true"/>
  </Formats>
</Driver>
```

4. Save the XML file.
5. Restart the MapInfo Pro application.

6. Try to perform any operation. For example, Resample. The newly added format (.jp2) should be available for selection in **Save as type** drop-down list.

Enable or Disable a Driver

You can enable or disable a Raster format driver form the **Raster Preferences** dialog. To access the **Raster Preferences** dialog:

1. Click on the **PRO** tab at the top left corner of the MapInfo Pro application window.
2. Click **Options**, and then click **Preferences** to open the **Raster Preferences** dialog box.
3. Click **Raster Formats** to see the list of supported drivers.

There are a number of image formats in use in GIS world. MapInfo Pro Advanced enables you to easily add new image format for display and processing. On the **Raster Preferences** dialog box, from the **Native Formats** tab, load a driver by checking the corresponding check boxes for processing and display. To unload a driver, clear both check boxes.

Enable Processing - When checked, you can perform analysis or processing operation on the raster.

Enable Display - When checked, you can display the raster on the map window; however, you can not perform analysis or processing operation on the raster.

After making changes in the the **Raster Preferences** dialog, you need to restart the MapInfo Pro application to make the changes to take effect.

Updates in Random Access Block Iterator APIs

Updates in the API

We have improved the Random Access Block Iterator by adding `bUnloadTIles` flag to the `GetBlock()` API. While reading a raster through block iterator, this parameter gives you control over whether to unload tiles after current block access. When the flag is set to true, this will free up the memory after current block access completes, however, performance may suffer as cached data is freed up.

By default, `bUnloadTIles` is set to false.

Preserving Raster Preferences Settings During Upgrade

Raster Application data (appdata) files are the settings files that MapInfo Pro uses while upgrading. These files are located at `C:\Users\<Username>\AppData\Roaming\MapInfo\Raster\400` (where 400 denotes the version number).

1. MIRasterPreferences.xml - for Raster SDK
2. MapInfoRasterUIPreferences.xml - for Raster User Interface.

By default, MapInfo Pro installer preserves the user's settings while upgrading, and skips overwriting preferences files, if they already exist. Therefore, while upgrading, you might miss out on settings introduced in the latest version. If you wish to install the latest preferences files, rename or move the existing ones before upgrading so that the installer can copy the latest preferences files.

Important - If you upgrade MapInfo Pro, the upgrade process does not replace/update the existing MIRasterPreferences.xml file in AppData folder. This is by design, so that you do not lose your old preference settings. If you want to install the latest preferences and retain the old preferences as well, rename or move the existing MIRasterPreferences.xml file to preserve your settings. This would allow the installer to place the most recent preferences files in the app data folder. After upgrading, you can edit the new MIRasterPreferences.xml file and map your settings with the saved file.

For example, MapInfo Virtual Raster was introduced in MapInfo 17.0.2 release. So, if you fresh install MapInfo Pro version 17.0.2, the installer places latest MIRasterPreferences.xml file in the App data folder to allow you access to new file format. This XML file has settings for Virtual Raster. Versions prior to 17.0.2 do not have Virtual Raster (.vrt) format support.

MapInfo Pro Advanced version 17.0.0

Improvements in the Create Raster tool (gridding)

Input Data Grouping for Interpolation

In addition to filtering data, now you can group input data for interpolation. This is very useful if you have a huge dataset and want to perform gridding on selected data only.

In this release we have added the ability to filter/group input data using an attribute column. This allows you to create multiple output rasters from single input dataset by using an input column as a grouping variable. It works for numeric, and text data types. For LIDAR dataset it allows you to grid certain classes of data such as elevation, intensity and point classification.

Support for Smoothing in Interpolation Methods

You can now apply smoothing on the gridded data to produce smoother surface. Smoothing is used to enhance the sharpness of an image or improve the appearance of the edges. Select a suitable Smoothing method and level for your data.

To set the smoothing level for the output raster, move the smoothing slider. You can set a value between 0 to 6. A value of zero applies no smoothing. A value of 6 applies maximum smoothing.

Ability to Specify Spline Tension for Minimum Curvature Interpolation

You can now specify a value between 0 and 1 to apply tension to the splines. The default value is 0. A smaller setting will result in lower overall curvature, or smoother surfaces. However, this can result in undershoots and overshoots in regions where there is no data and the interpolator is unconstrained. A higher setting will result in less smooth surfaces but tends to reduce the amount of undershoot and overshoot. When gridding terrain or bathymetry data it is beneficial to use a moderate level of spline tension (0.25).

Support for Polygon clipping in Interpolation Methods

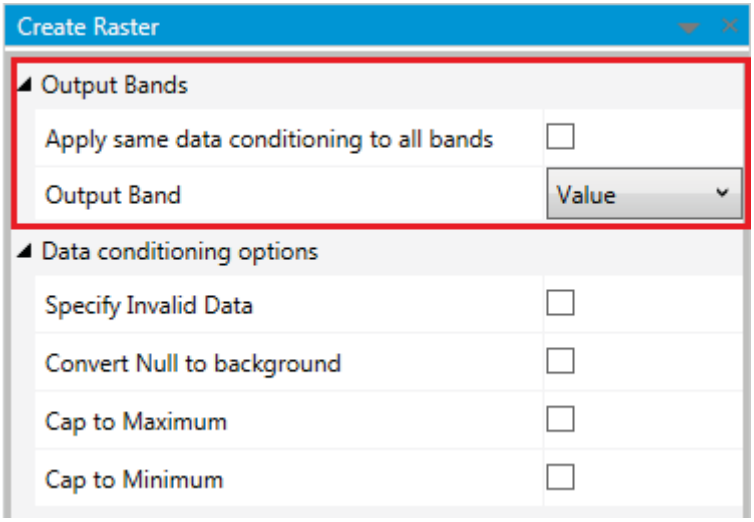
Support for Polygon clipping gives you better control over the finished appearance and shape of the output grid.

- Polygon - You can provide a TAB file of polygon(s) to clip the output raster to the polygon boundaries. You can specify whether to clip a region outside or inside the raster bounds. However, it does not support polygons with holes.

Per Band Data Conditioning

Added the ability to control input data conditioning on a per band basis. To apply per band data conditioning, click the button on the **Create Raster** dialog.

You can now apply data conditioning either for all bands or individually for the selected band.



Coordinate (spatial) Data Conditioning

Added the ability to perform spatial data conditioning on input data. You can now filter data based on the rectangle or polygon drawn on the map. The gridding will be performed on the selected data only.

Enhancements to the Existing Raster Tools

Raster Operations	Descriptions
Convert	**Set advanced properties for the output raster** When converting your raster dataset, you can set some advanced properties for the output raster such as Raster Name, Field Name, Band Name, Band Data Units and Band Data Type.
Merge	**Edit Primary Raster**

Raster Operations	Descriptions
	In the Merge operation, now you can stamp multiple raster's data into the primary raster. We have added the **Edit Primary Raster** checkbox that enables you to stamp data from one or more rasters into the primary raster, instead of creating an output raster file. This is useful when you want to edit/update existing raster file.
Combine 	**Relaxed input raster's combine limitations** MapInfo Pro Advanced now allows you to combine input raster files even if they have different projection, origin or cell size. Previously, the Combine operation required that the raster's origin, cell size and projection should be same.
Classify 	**Added Support for Save/ Load class intervals for classified raster** When reclassifying a classified raster into numeric or classified raster, you can use **Load** and **Save As** buttons to load/create class intervals/mapping into .class text file. Now you can also load vertical mapper .pfr files into MapInfo Pro Advanced.
Viewshed 	**Complex Calculation Support** We have added a **Use Complex Calculations** check-box in the Viewshed tool. Now, MapInfo Pro Advanced calculates the value by which the height of the target point should be raised or lowered to make the point visible from the viewing point (source).
Rasterize 	**Perform Rasterization on specified bounds** In the **Rasterize** dialog box, click **Output Geometry** to limit the output data points according to specified region (bounds) and ignore all points that lie outside of the specified region. Only the data within the specified bounds will be written in the output file.
Point Inspection 	**Added Support for Editing/updating input TAB file** In the **Point Inspection** dialog, you can either create a new TAB file or update the existing column(s) of the input TAB file. You can also specify a value for the null-cell and no-cell. We have improved the support for compatible data types in the output TAB columns. Now the output column follows the input raster's band data type and creates/updates compatible data type of output TAB columns.
Cell Value 	**Navigation Controls for Cell Information** Added navigation controls to the **Neighboring Cells** tab. In the **Cell Value** dialog, you can inspect values of cells around the selected cell without a mouse-click on the map. Now you can click the navigation button around the cell matrix to see values of neighboring cells. Open the **Cell Value** tool in **Full** mode. Click on the map, and when the **Cell Value** window opens, click **Options** and then click on the **Neighboring Cells** tab.

Batch Mode Processing

You can run some of the raster processing operations in an automated batch process. Running an operation in Batch Mode allows you to process multiple inputs with the same set of input parameters in a single go. Batch Mode is very useful to process multiple files with the same input settings. For example, reprojecting a number of raster files to a specific projection.

Note: The input raster's properties, (for example, field type, coordinate system and geometry) should be same.

The following raster tools support batch mode processing:

- Convert
- Resample
- Reproject

Currently, if you want to process multiple files with Convert, Resample and Reproject operations, you need to work with each file one by one and then execute them individually. In batch mode you can select a number of files together and execute the operation in one go.

Multi-threading

If your computer has multiple CPUs or multiple cores, the batch processing functionality can make use of multi-core processors and execute multiple files concurrently. This can be configured through the **Raster Preferences** dialog by selecting the **Run Tasks Parallelly in Batch Mode** option from the **Processing and Analysis** tab.

Output File Name Extension

The output file name in batch mode is auto-generated, however, you can choose a prefix and suffix for the output files. The default output file name is the same as the input file name. You can also choose the output file directory and select the desired file extension.

Log Summary

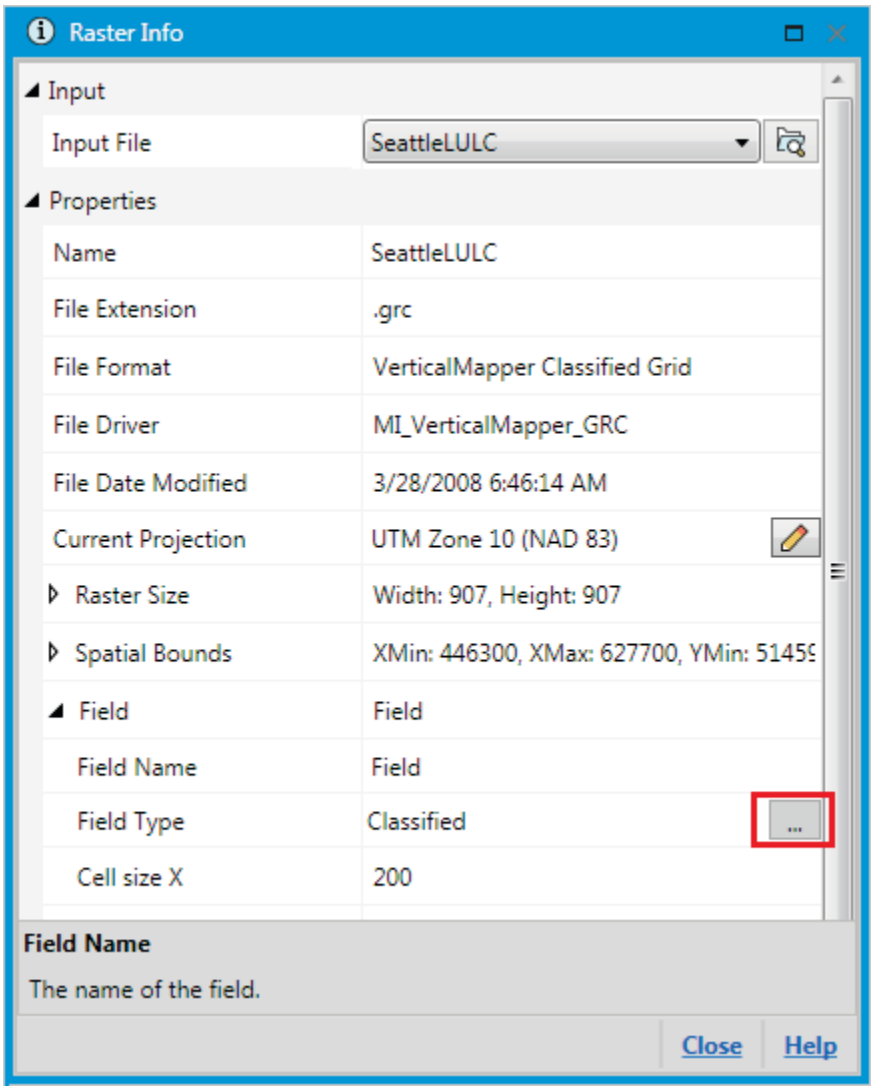
You can view a summary of the tasks processed.

Improvement in Raster Info tool

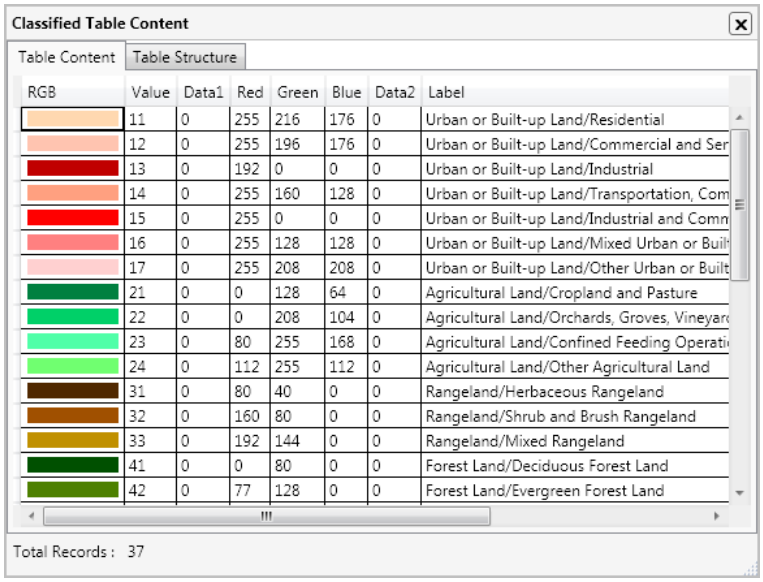
The Raster Info tool has been improved for ease of use. The Raster Info tool now allows you to view the contents of a classification table in a classified or image palette raster.

To view the additional information about a raster dataset:

1. Open a classified or image palette raster in the map window. You can click the  button to browse and select a classified or image palette raster.
2. On the **Raster** tab, in the **Properties** group, click **Raster Info** to display the **Raster Info** window. The **Raster Info** dialog box displays showing information about the input raster dataset as shown in the figure below:



3. Click the Ellipse button to display Classified Table Content.
   The **Classified Table Content** dialog box displays as shown below:



Support for Alpha Channel

Support for Alpha Channel

MapInfo Pro Advanced now supports images with Alpha Channel transparency. Alpha Channels are masks through which you can display images. The Alpha Channel is an 8-bit channel, which means it has 256 levels of gray from 0 (black) to 255 (white). The resulting image is called RGBA (RGB+A, A means Alpha Channel).

All supported imagery files will now support The Alpha Channel for rendering.

You can control the rendering of the Alpha Channel in your raster data from the **Display** tab of **Raster Preferences** dialog box. By default, the rendering of the Alpha Channel is enabled in MapInfo Pro Advanced.

Export Histogram Data to ASCII

MapInfo Pro Advanced now supports exporting histogram data to an ASCII file in the CSV format. Now, from the Statistics dialog box you can export the statistical information to a CSV.

1. Select an input raster whose statistics you want to view or calculate.

   Note: If you open a file for which statistics are not available, the **Calculate Statistics** button gets enabled and MapInfo Pro Advanced prompts you to calculate statistics.

2. Select one of the modes for calculating the raster statistics.
3. Click **Calculate Statistics** to calculate the statistics.
4. Scroll down and click **Export**.

In the CSV file the header line string order is Value, Count, Percentage and Percentile.

Export to ESRI ASCII Grid

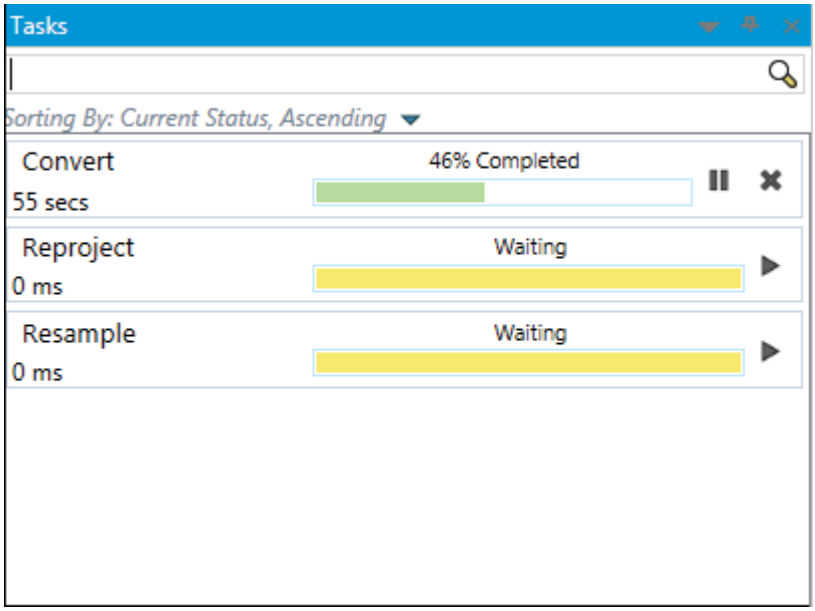
The **ESRI ASCII Grid** option in the **Export** tool enables you to export a raster data into an ESRI ASCII format raster. You can then use this format for analysis with other software applications. The output raster file will contain header information that defines the properties of the raster such as the cell size, the number of rows and columns, and the coordinates of the origin of the raster. The header information is followed by cell value information delimited by spaces, with each row separated by a carriage return.

Sequential Processing

In this release, MapInfo Pro Advanced has enabled Sequential Processing, in addition to Parallel Processing.

Previously, all operations started in parallel processing mode and used all available CPU resources. Now, you can run the tasks in Sequential Processing mode. This can be configured through the **Raster Preferences** dialog in the backstage.

When Sequential Processing is enabled, the Raster engine concentrates fully on one operation and the rest of the operations are placed in a queue and automatically started sequentially as soon as the current operation gets completed. However, if you still want to run a particular task in parallel, you can click the ▶ button against the task in the **Task Manager**. For example, if the **Create Raster Multifile** operation is running on a huge data-set and a **Convert** operation is waiting in the queue, you can manually start the Convert operation from Task Manager by clicking the Play button. This way both of the operations can be run in parallel. There is no limitation on the number of operations that can be manually started in the parallel mode.



If you want to run all the operations in parallel as was the case earlier, you can disable sequential processing option by clearing the **Run Tasks in Sequential Mode** checkbox in the **Raster Preferences** dialog under **Memory and Performance** tab.

When you click **Process** to start the raster operation process, the task is added to the Task Manager where you can monitor the progress. On completion of the operation, if you have selected **Display** output file check-box in **Output Settings**, the raster displays in the map window.

Support for Auxiliary File Formats

We have added support for the following auxiliary files:

- PAMDataset - Added support to read classification table information from PAMDataset XML metadata. Now you can load and render PAMDataset files as classified fields.
- *.wcf - Warp Control File - Read only support. It means you can perform analysis on the input file, however, you can not save the output in a file.
- .pfr - Added support to read classification information from .pfr files.

Known Issues

Issues with Creating a .PPRC for Rasters with 1/2/4 bit color data types

Overview pyramid (PPRC) file for legacy rasters is not created correctly for 1/2/4 bit color types.

Workaround: To resolve this issue, convert it to the Multi-Resolution Raster (.mrr) format. We also recommend that you change the data type to 8-bit greyscale.

Licensing error occurs while calling SDK APIs on languages other than English locale

- **Licensing error occurs while calling SDK APIs on languages other than English locale machine settings**

  This issue occurs because Raster SDK is not getting authenticated with valid license for the required APIs.

  Workaround - As a workaround copy the following licensing DLLs from MapInfo Pro install directory (for example, `C:\Program Files\MapInfo\Professional`) and paste them into the same directory from where you are running the program.

  - LicenseManagerAPI.dll
  - licenser.dll
  - licenser_libFNP.dll
  - licenser_res.dll

- **MIRCS-189 - TIFF file (one-bit data) not rendered correctly**

  The raster is loaded correctly and when viewed at a suitable small scale, displays correctly. However, when viewed at larger scales the raster may not render as expected. At larger scales, the raster data is being acquired from the overview pyramid.

The issue arises because the data type used to store data in the overview pyramid is the same as the original source data type. In this case that data type is a single bit. Because of the lack of resolution in this data type, the overview levels lack the expected data fidelity.

Usually these type of images tend to fade to background as you zoom out because background pixels outnumber foreground pixels in the base level and so the foreground tends to progressively drop out. So it can appear that there is no data in the file until you zoom in.

These TIFF images contain 1-bit imagery (0 = white, 1 = black). They mount as "Image" field type in MapInfo Pro 17.0 and the data is loaded properly. If you have PPRC files created by previous versions, you are advised to delete them. One possible workaround is to convert the source raster to an 8-bit MRR image.

- **Temp Folder Size** - When performing an operation on a large raster dataset, if the memory in your temp folder is not sufficient, the raster operation may not be successful. We recommend you ensure that the MapInfo temp folder has sufficient memory to create large raster.
- Warp Image - The Warp Image feature is still a work in progress and at times it may not produce the desired output.

Progress and Resolution of Outstanding Issues

MapInfo Pro Advanced 17.0.3

Issue Number	Description and Resolution
MIRAST-16712	Memory issue with reprojection of rasters. The memory leak was observed in Reproject API. **Resolution:** Fixed.
MIRCS-362	Issue with the Classify tool - MapInfo Pro stops responding while reclassifying a calssified MRR with empty tiles. **Resolution:** Fixed.
MIRCS-357	Issue with importing Contour profile (.pfc) files from an earlier version of Planet (MapInfo Pro 12.5) to the current version of Planet (MapInfo Pro 16.0). **Resolution:** Fixed.
MIRCS-328	Issues with creation of GHX file if raster file's directory path has German umlauts. The GHX file was getting created in user's Temp directory rather than raster file directory. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIRCS-324	Specific .tiff files were not opening in MapInfo Pro. **Resolution:** Fixed.
MIRCS-297	Getting licensing error while calling SDK APIs on other locale setting except English. **Resolution:** Fixed.

MapInfo Pro Advanced 17.0.2

Issue Number	Description and Resolution
MIRCS-311	Raster Export Image tool throwing error for BIL, BIP, BSQ or ESRI .FLT grids. **Resolution:** Fixed.
MIRCS-308	Cross section Y Axis Scaling issue. **Resolution:** Fixed.
MIRCS-301	Incorrect translation of the Volume tool in MapInfo Pro 17.0.1. **Resolution:** Fixed.
MIRCS-280	All tools, in the Display group of the Raster tab, remain disabled in MapInfo Pro 17.0. This issue occurred if you run MapInfo 17.0 (EN) on non-English (Turkish locale) machine. **Resolution:** Fixed.

MapInfo Pro Advanced 17.0.1

Issue Number	Description and Resolution
MIRCS-284	Issue with drawing profile using the Interactive Cross Section tool. **Resolution:** Fixed. This issue occurred while using MapInfo 17.0 (English) build on non-English Machine. Change the system locale from non-English to English.
MIRCS-271	Raster image opened in MapInfo version 17.0 looked washed out with faded colors. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIRCS-255	The Rasterize tool - Incorrect output contents. The issue was due to incorrect polygon reading. **Resolution:** Fixed.
MIRCS-246	Exporting data to CSV - Not picking list separator from locale. The decimal values are exported with commas instead of points. **Resolution:** Fixed.

MapInfo Pro Advanced 17.0

Issue Number	Description and Resolution
MIRCS-89	Region inspection tool is not giving correct output. **Resolution:** Fixed.
MIRCS-92/MIRCS-85	The Contour tool always creates a TAB file in a non-earth projection ignoring the surface file projection present in the input TAB file. **Resolution:** Fixed.
MIRCS-93	Creating raster using multi-file gridding gets stuck. **Resolution:** Fixed.
MIRCS-94	Incorrect values in Rasterize for classes more than 65535. **Resolution:** Fixed.
MIRCS-100	If a projection is set for a GeoSoft GRD file and the Contour operation is run, the set projection is not retained in the output. **Resolution:** Fixed.
MIRCS-103	Custom Interval Loading, add ability to use percentile steps in the contour tool. **Resolution:** Fixed.
MIRCS-108	Provide an option to specify a value to be used for Null values found during point inspection. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIRCS-111	Export ASCII - Improve the Import tool to parse and accept Unicode characters. **Resolution:** Fixed.
MIRCS-110/MIRCS-112	Cross Section: Export option. The output TAB displays unnecessary underscores in column names. **Resolution:** Fixed.
MIRCS-116	MapInfo Pro stops responding when selecting Cell Value > All and clicking on a cell. **Resolution:** Fixed.
MIRCS-120	MapInfo Pro stops responding if the Insert Row button is clicked twice in Advanced Color. **Resolution:** Fixed.
MIRCS-121	When using the Merge or Resample tool, Multi-band raster data does not get the correct band values. **Resolution:** Fixed.
MIRCS-125	Create output raster band in same data type as input column's data type for operations. **Resolution:** Fixed.
MIRCS-126	The Create Raster tool has double tooltips for Select Columns. **Resolution:** Fixed.
MIRCS-145	The Create Raster function is only able to use the default PRJ file and not a Workgroup PRJ file. **Resolution:** Fixed.
MIRCS-146	Add more details to documentation for User defined breaks in the Advanced color in MapInfo Pro Advanced. **Resolution:** Fixed.
MIRCS-147	The Advanced color break option table should allow values less than statistics. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIRCS-151	The output from Contour operation for TIF input raster is not honoring "Match colors to input" option. **Resolution:** Fixed.
MIRCS-152	Issue with Contour operation, if statistics are not present. **Resolution:** Fixed.
MIRCS-158/MIRCS-265	Add Save and Load settings like Vertical Mapper feature, under Classified Grid Reclassification tool. **Resolution:** Fixed.
MIRCS-165	A vector file containing lines to DEM is not working in Rasterize tool. **Resolution:** Fixed. This issue is resolved with the support for line /polygon geometries added in the gridding operation.
MIRCS-167	The Viewshed operation produces incorrect output. The output is not generated for few points. **Resolution:** Fixed.
MIRCS-169	Error occurs when using the Contour operation. **Resolution:** Fixed.
MIRCS-173	Rasterize produces raster with streaks. **Resolution:** Fixed.
MIRCS-179	Classify operation not honoring the .class entries. **Resolution:** Fixed.
MIRCS-181	Add the Complex Viewshed feature in the Viewshed tool as in Vertical Mapper. **Resolution:** Fixed.
MIRCS-182	Vertical Mapper GRC file not getting clipped correctly to polygon. **Resolution:** Fixed.

Issue Number	Description and Resolution
MIRCS-191	When Parameter Unit is set as "Distance", the exact distance value of Maximum Triangle Size is not being used in the Create Raster tool. **Resolution:** Fixed.
MIRCS-194	Needed a function to Convert a numeric or classified raster to an RGB colour image (e.g. TIF, JPEG, PNG). **Resolution:** Fixed. Added a new Export Image tool to address this request.
MIRCS-195	MRR clipping memory error. **Resolution:** Fixed.
MIRCS-206/MIRCS-129	Point Inspection enhancements cater this customer issue. **Resolution:** Fixed.
MIRCS-213	Advanced Color and color stretch is enabled for non supported files. **Resolution:** Fixed.
MIRCS-249	Cross Section browser does not respect restricted decimal precision. **Resolution:** Fixed.
MIRCS-262	The Viewshed tool gives incorrect results when “View Point Height” is set to “Constant” in the multipoint TAB file. **Resolution:** Fixed.
LI360	Cross Section profile view resets after export. **Resolution:** Fixed.

System Requirements

This product is tested on the following Microsoft Windows Desktop Operating Systems:

- Windows 10 64-bit
- Windows 8.1 64-bit

- Windows 7 Ultimate 64-bit SP1
- Windows 2016 Server 64-bit
- Windows 2012 Server R2 64-bit SP1
- Windows 2012 Server R2 64-bit with XenApp 7.5
- Windows 2008 Server R2 64-bit SP1
- Windows 2008 Server R2 64-bit SP1 with XenApp 6.0

Dependencies and Prerequisites

We recommend ensuring that your machine has the latest updates before installing Pro.

The install wizard checks for the following and prompts you if not already on your system; you can choose to have the install wizard install these requirements, or cancel the installation if you do not want to proceed.

- Microsoft Office Access database engine 2010 (x64)

  This does not install when the 32-bit office 2010 driver is installed.

- Microsoft Office Access database engine 2007 (x64)

  This installs only on a 64-bit operating System that has the 64-bit 2010 driver installed.

- Microsoft .NET Framework 4.6.1

  Windows 8.1 and Windows Server 2012 R2 must have KB2919355 installed before installing Microsoft .NET Framework 4.6.1.

- Microsoft Visual C++ 2015 Update 3 redistributable (x64)
- Windows fixes and updates:

Operating System	Required Update
Windows 7 and Server 2008 R2	Hotfix KB3154529
Windows 8 and Server 2012	Hotfix KB3154527
Windows 8.1 and Server 2012 R2	Hotfix KB3154528
Windows 10 *	Cumulative Update KB3156387

* On Windows 10, the install wizard does not install the Cumulative Update. Ensure this update is installed before installing this release.

Windows 8.1 and Server 2012 R2

A Windows 8, 8.1, Server 2012, or Server 2012 R2 system must have Microsoft Update 1 (KB2919355) installed before installing MapInfo Pro. To obtain this update, go to **https://support.microsoft.com/en-us/kb/2919355**. This update may require that you restart the machine.

Installing 32-bit and 64-bit Microsoft Office Drivers

MapInfo Pro is a 64-bit application that can access spreadsheets and tables from both 64-bit and 32-bit editions of Microsoft Excel and Access. However, to use data from Excel and Access in MapInfo Pro, you must have the Microsoft Office 64-bit drivers installed.

As part of the MapInfo Pro installation process, the 64-bit Microsoft Access Database Engine 2010 Redistributable for Office is installed.

If you require the 32-bit edition of Microsoft Office on the same system with MapInfo Pro, the following procedure shows you how to install both versions of Office drivers.

Note: Microsoft does not support both drivers installed on the same computer citing incompatibility between the product editions or their components, see **http://support.microsoft.com/kb/2269468**.

To install Microsoft Office 32- and 64-bit drivers on the same system:

1. Download the Microsoft Office drivers from **http://www.microsoft.com/en-ca/download/details.aspx?id=13255**.

   The 32-bit version is `AccessDatabaseEngine.exe`. The 64-bit version is `AccessDatabaseEngine_x64.exe`.
2. Uninstall the 64-bit Office driver, if installed, and reboot the system. You will already have it installed if you have installed MapInfo Pro 64-bit.
3. Install the 32-bit Office 2010 driver.
4. In the System folder (for example C:\Windows\System32), right-click on `cmd.exe` and select **Run as administrator**.
5. At the command prompt navigate to the folder where the 64-bit Office 2010 driver is located.
6. Type the command and press enter: `AccessDatabaseEngine_x64.exe /passive`
7. If you have a 32-bit version of Microsoft Office 2007, 2010, 2013, or 2016 installed, then delete or rename its `mso.dll` registry key.
   a) Open the **Registry Editor** window. On the Microsoft **Start** menu, type `regedit` in the **Search** field, and then click **regedit.exe**.

b) In the **Registry Editor** window, navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office\14.0\Common\FilesPaths`.

c) If there is a `mso.dll` value, either delete it or rename it.

If you do not delete or rename the file, then may see a reconfigure message when you open a Microsoft Office application.

Both drivers are now installed on your system.

Opening Office 2013 32-bit Excel and Access Files

There is a potential issue when both 32-bit and 64-bit versions of MapInfo Pro are installed on the same machine along with the 32-bit version of Microsoft Office 2013. The 32-bit version of MapInfo Pro can close unexpectedly when opening tables generated in the 32-bit version of Excel 2013 or Access 2013.

The section *Installing 32-bit and 64-bit Microsoft Office Drivers* in the *MapInfo Pro Install Guide* describes how to install the Microsoft Office 32- and 64-bit drivers on the same system. If after following these steps your 32-bit version of MapInfo Pro closes unexpectedly when opening Excel 2013 and Access 2013 tables, then follow the steps outlined below.

1. Uninstall both of the Microsoft Access database engine 2010 drivers.
   a) From the **Start** menu, select **Control Panel**.
   b) On the **Control Panel**, select **Programs and Features**.
   c) Scroll through the list to locate and select **Microsoft Access database engine 2010**. There will be two instances of this application in the list.
   d) Select **Uninstall** and follow the instructions that the uninstall procedure provides.
   e) Select the second **Microsoft Access database engine 2010** and uninstall it.
2. Download and install the 32-bit version of Microsoft Access Runtime 2013 (called `AccessRuntime_x86_en-us.exe`) from **https://www.microsoft.com/en-us/download/details.aspx?id=39358**.
3. Download the 64-bit version of Microsoft Access Database Engine 2010 (called `AccessDatabaseEngine_x64.exe`) from **https://www.microsoft.com/en-us/download/details.aspx?id=13255**. Make note of the download location, such as `C:\Users\myname\Downloads`.

   CAUTION: Do not run (install) from your internet browser window, download it first.

4. Install the 64-bit version of Microsoft Access Database Engine 2010 (called `AccessDatabaseEngine_x64.exe`).
   a) Open a command prompt window with Administrator privileges. In the system folder `C:\Windows\System32`, right-click on `cmd.exe` and select **Run as Administrator**.
   b) At the command prompt, change directories to the `AccessDatabaseEngine_x64.exe` file (type `cd C:\Users\myname\Downloads` and press **Enter**).

c) At the command prompt, type `AccessDatabaseEngine_x64.exe /passive` and press **Enter**.

5. If you have a 32-bit version of Microsoft Office 2007, 2010, 2013, or 2016 installed, then delete or rename its `mso.dll` registry key.
   a) Open the **Registry Editor** window. On the Microsoft **Start** menu, type `regedit` in the **Search** field, and then click **regedit.exe**.
   b) In the **Registry Editor** window, navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Office\14.0\Common\FilesPaths`.
   c) If there is a `mso.dll` value, either delete it or rename it.

      If you do not delete or rename the file, then may see a reconfigure message when you open a Microsoft Office application.

Both 32-bit and 64-bit drivers are now installed on your system, and you can open Access 2013 and Excel 2013 files in both 32-bit and 64-bit versions of MapInfo Pro.

MapInfo Pro Database Connectivity and Support

MapInfo Pro supports the following spatial database servers:

- Microsoft SQL Server 2016 (also called SQL Server Spatial)
- Microsoft SQL Server 2014 (also called SQL Server Spatial)
- Microsoft SQL Server 2012 (also called SQL Server Spatial)
- PostgreSQL 9.5.3 with PostGIS 2.2.2
- PostgreSQL 9.4.2 with PostGIS 2.1.7
- PostgreSQL 9.2.2 with PostGIS 2.0.1
- SQLite 3.8
- Oracle Spatial 12c R1
- Oracle Spatial 11g R2

In order for MapInfo Pro to access a remote database, you must install a client or driver. The following are ODBC drivers that MapInfo Pro supports:

- Microsoft Access ODBC
- Microsoft SQL Server Native Client 11.0
- PostgreSQL Unicode ODBC driver 9.05.03
- FDO toolkit 3.8 (used by SQLite and installed with MapInfo Pro)
- Oracle Instant Client 12.1.0.2.0

You can also open tables of data from the following and make them mappable, but only for point data:

- Microsoft Access 2010, 2013, and 2016

For more about working with remote database information, see *Accessing Remote Data* and *Setting your Database Connection Preferences* in the *Help System.*

Microsoft Office Support

MapInfo Pro supports Microsoft Excel (*.xls , *.xlsx) and Microsoft Access (*.mdb, *.accdb) formats for versions 1997 to 2016.

MapInfo Pro Web Server Support

MapInfo Pro supports the following web servers:

- GML (Geospatial data in XML format) 2.1.2. The Universal Translator (FME Quick Translator) supports versions up to 3.2.
- Web Feature Service (WFS) 1.0, 1.1, and 2.0
- Web Feature Service with transactions (WFS-T) using WFS 1.0
- Web Map Service (WMS) 1.3
- Web Map Tile Service (WMTS) 1.0

MapInfo Pro also supports the mapping tile servers:

- Google Enterprise tile server
- MapXtreme.NET 8.0 tile server
- Microsoft Bing tile server
- OpenStreetMap tile server
- Spectrum Spatial Server 11.x

Installing from a DVD Requires a Drive Letter

The Installer must be run from a drive with a letter such as "G" and not from an explicit uniform naming convention (UNC) path. For example, you might have the MapInfo Pro DVD in your computer as USERSPC. Other users may share this device as USERSPC; however, it would not contain a drive letter. The MapInfo Pro Installation program requires a drive letter. To remedy this situation, map your network drive to a specific drive letter:

1. In Windows Explorer, right-click the shared directory or DVD drive that contains the MapInfo Pro SETUP.EXE and select Map Network Drive.
2. Choose a drive letter to map.
3. Run the Installation Program again from the newly mapped drive letter.

Installing / Upgrading MapInfo Pro

We recommend you to make sure of the following before starting the process to install / upgrade:

- You must have Administrator rights to run the Installer.
- The Installer requires that your TEMP variable be set to a valid directory.
- You must exit from all Windows programs before beginning the installation process.

The installer for MapInfo Pro will install all the files necessary to run Pro in multiple languages. During the installation process the first question will be what language would you like to run Pro in. This will be the default language of the Pro Application. The list of available languages to choose from will depend on what is available in the installer. Eventually all languages will be available as the localization process finishes up.

MapInfo Pro users who register with a Pitney Bowes online account are able to run MapInfo Pro in a connected **Viewer** Only (subscription) mode. The MapInfo Pro installer adds a shortcut (Icon) to the Windows Start Menu to start MapInfo Pro in Viewer (subscription) mode. This icon is located next to the regular MapInfo Pro Start Menu shortcut.

Advanced users may wish to run Pro in a different language than was chosen at installation time. This will now be possible by copying the MapInfoPro.exe.config from a language sub-folder (such as fr, de, ja, zh-CN) under the MapInfo Pro installation location on top of the MapInfoPro.exe.config in the MapInfo Pro installation location. Most users will never need to do this, but if you do try it, be sure to make a copy of the file first! Be aware that many Pro settings such as ribbon customization are locale-specific.

These are the language versions of Pro and the sub folders used (Changing AppLocale or System Charset via .config file is for advanced users only).

UI Locale and Sub Folder Name	AppLocale Name	AppLocale code	Language Country/Region	CodePage	SystemCharset Name
zh-CN	zh-cN	2052	Chinese (Simplified)	936	WindowsSimpChinese
cs	cs-CZ	1029	Czech - Czech Republic	1250	WindowsLatin2
da	da-DK	1030	Danish - Denmark	1252	WindowsLatin1

UI Locale and Sub Folder Name	AppLocale Name	AppLocale code	Language Country/Region	CodePage	SystemCharset Name
nl	nl-NL	1043	Dutch - The Netherlands	1252	WindowsLatin1
en	en-US	1033	English - United States	1252	WindowsLatin1
fi	fi-FI	1035	Finnish - Finland	1252	WindowsLatin1
fr	fr-FR	1036	French - France	1252	WindowsLatin1
de	de-DE	1031	German - Germany	1252	WindowsLatin1
he	he-IL	1037	Hebrew - Israel	1252	WindowsHebrew
it	it-IT	1040	Italian - Italy	1252	WindowsLatin1
ja	ja-JP	1041	Japanese - Japan	932	WindowsJapanese
pl	pl-PL	1045	Polish - Poland	1250	WindowsLatin2
pt	pt-BR	1046	Portuguese - Brazil	1252	WindowsLatin1
ru	ru-RU	1049	Russian - Russia	1251	WindowsCyrillic
es	es-ES	1034	Spanish - Spain	1252	WindowsLatin1
sv	sv-SE	1053	Swedish - Sweden	1252	WindowsLatin1
tr	tr-TR	1055	Turkish - Turkey	1254	WindowsTurkish

You can install or upgrade MapInfo Pro using the Interactive Installation Wizard or silently through the command line.

Note: For detailed instructions on installing MapInfo Pro, see the *MapInfo Pro Install Guide*. To access the *MapInfo Pro Install Guide* and other documents, launch the MapInfo Pro DVD auto-start presentation by double clicking the `autostart.exe` in the root folder of the DVD and then clicking **Online Reference** and **MapInfo Pro Install Guide**.

Upgrading from MapInfo Pro versions 17.0, 17.0.1 or 17.0.2

You can install and run two or more different versions of MapInfo Pro together. Previously, you were not required to uninstall an already installed version before installing the latest version. This holds true for version 17.0.3 as well, except if you have installed a previous version of the 17.x.x series. In this case, you must first uninstall the installed 17.x.x series version before installing version 17.0.3.

When installing version 17.0.3 using the Interactive Installation process, the installer takes care of uninstalling any previous version of the 17.x.x series, if installed. For details, see **Installing MapInfo Pro Interactively**.

But if you are attempting to install MapInfo Pro version 17.0.3 silently, you must explicitly uninstall any installed version of the 17.x.x series, either from the Windows **Add or Remove Programs** settings or silently from the command-line. For details, see **Installing MapInfo Pro Silently**.

Installing MapInfo Pro Interactively

You must have Administrator rights to run the Installer, and the Installer requires that your TEMP variable be set to a valid directory.

CAUTION: We strongly recommend that you exit from all Windows programs before beginning the installation process. If you are upgrading from an earlier version of MapInfo Pro, we recommend that you uninstall before upgrading.

MapInfo Pro provides its application data files to each user. Called a Per-User install, this functionality runs the first time you run MapInfo Pro or MapInfo Pro client on a machine, and each time the MapInfo Pro Installer is run thereafter. The application data files include, among others, the Pen Styles file, Custom Symbols files, and Thematic Legend templates. These files allow different users to have custom settings.

To install MapInfo Pro:

1. If installing from a DVD, the Installer automatically launches. If the Installer does not automatically launch, then go to the DVD drive and click on `autostart.exe`. If installing from a download, go to the directory into which you downloaded MapInfo Pro and right-click the `setup.exe` file, select **Run as Administrator** from the pop-up menu to install using elevated privileges.

   If you see a prompt for permission to continue. Click **Allow** or **Yes** to proceed.

   The wizard begins to lead you through the installation process.

2. On the **Launcher** menu, choose **Install Products**.
3. Choose **MapInfo Pro** and then choose **MapInfo Pro Installer**.

   You may see a prompt for permission to continue. Click **Allow** or **Yes** to proceed (if you do not respond and the message times-out, the install is unsuccessful).

4. Select the language in which you want to install MapInfo Pro.

   In version 17.0.3, you have the option of installing MapInfo Pro in sixteen different languages other than English. You can choose between Brazilian, Chinese, Czech, German, Danish, Spanish, Finnish, French (Standard), Hebrew, Italian, Japanese, Dutch, Polish, Russian, Swedish and Turkish.

5. If any of the prerequisites listed under **Dependencies and Prerequisites** are not already installed on your system, a display will prompt users to install the missing prerequisites. Click **Install**. Installing the prerequisites takes several minutes—the status of each prerequisite updates as it installs.
6. If you see a message that MapInfo Pro requires a reboot, click **Yes**. You must reboot to continue with the installation.
7. Click **Next** to continue the process.
8. On the **License Information** dialog box, review the license. Click **Next** to continue.
9. On the **Customer Information** dialog box, do one of the following:

   - Select the **MapInfo Pro - Licensed or Trial version** check-box, type your user name, organization, serial number, and access code in the corresponding fields and click **Next** to continue.

     The user name and organization fields are mandatory. If you also enter the serial number and access code, MapInfo Pro Licensed version is installed. If no credentials are entered, the trial version of MapInfo Pro is installed.

     This installs MapInfo Pro Licensed or Trial version based on the information provided and creates a shortcut to MapInfo Pro in the **Start** menu.

   - Select the **MapInfo Viewer Subscription** check-box, type your user name and organization and click **Next** to continue.

     This installs MapInfo Pro in the subscription mode and creates a shortcut to MapInfo Viewer in the **Start** menu.

   - Select both the check-boxes and click **Next** to continue. Shortcuts to both MapInfo Pro and MapInfo Viewer are created in the **Start** menu.

   Note: If you choose to select both **MapInfo Pro - Licensed or Trial version** and **MapInfo Viewer Subscription** check boxes, MapInfo Pro would be the default application associated with MapInfo Pro registered file types such as workspace (*.wor) or table (*.tab).

   The serial number and access code are listed on the Product Activation Information Card or emailed with your license details, and are used to activate your product.

10. Do one of the following:

    - If your organization purchased node-locked licenses, the third character of your serial number is "**N**". Skip this step and go to **step 12**.

- If your organization purchased concurrent licenses, the third character of your serial number is "**S**" or a distributable license, the third character of your serial number is "**D**". In this case, the **License Server Name** and **License Server Port Number** fields display on the dialog box.

  Note: For more information about node-locked, concurrent and distributable licenses, see **Starting and Activating MapInfo Pro** under Chapter 3 of the MapInfo Pro Install Guide.

  If you know the license server name and port number, type them here. If you do not, you can continue with the installation without filling in the license server name and port number. You will have another opportunity to supply this information when you start MapInfo Pro.

11. Click **Next** to continue.
12. Select one of the following options and then click **Next** to continue:
    - **Typical** – Choose this option if you will be using MapInfo Pro as a desktop application including remote database access and connectivity.
    - **Custom** – Choose this option to restrict the components that are installed by the installation program. For example, you can prevent the installer from adding the documentation and tools.
13. Select the destination folder where you want to install MapInfo Pro and click **Next**.
14. Click **Install** to finish the installation process.

For detailed instructions on installing MapInfo Pro interactively, see **Chapter 2: Installing MapInfo Pro** from the **MapInfo Pro Install Guide**.

Installing MapInfo Pro Silently

You can only perform a completely silent install of MapInfo Pro when your install process has elevated administrative privileges.

The command-line options `/q` and `/qn` do not work when the User Access Control (UAC) is turned on and your install process does not run with elevated administrative privileges. These options turn off the user interface during the installation, which suppresses the Windows UAC. Users must interact with the UAC to provide the necessary credentials to run the installation as an administrator. If the user interface is turned off, the installation is terminated without warning because the UAC cannot gather the appropriate credentials.

To work around the problem, use the `/qb` option in the command line when you run the silent install. This option gives the installation a basic user interface and allows the UAC to display on the dialog box.

If you have MapInfo Pro version 17.0, 17.0.1 or 17.0.2 installed, you must first uninstall it before installing version 17.0.3.

To silently uninstall:

1. Type the following command,

```
start /wait MsiExec.exe /X{GUID} /qn RETLIC=False SDRLYN=False
```

   Replace `{GUID}` in the command above with the ones below.

   - MapInfo Pro version 1700 - `{76BBDCCA-97EA-435B-8334-C1E2320200C9}`
   - MapInfo Pro version 1701 - `{1870C3D1-39A1-41CB-8894-ADB153344546}`
   - MapInfo Pro version 1702 - `{BBDC123D-93AC-4CA0-8985-90FBFCBCAA87}`

2. Followed by,

```
CD "%~dp0"
```

To perform a silent install using the `/qb` option:

3. From the command prompt, go to the MapInfo Pro setup directory. The MapInfo Pro installation `setup.exe` indicated in the steps below can be found on the installation DVD (D:\) in this directory: `\Install\MI_PRO\DISK1`.
4. Type the following command:

```
setup.exe /L#### /s /v"/qb USERNAME=\"MyUser\"
COMPANYNAME=\"MyCompanyName\" PIDKEY=M############### ACCD=######"
MPRO=#### MVWR=####
```

   where:

   `/L####` is the 4 digit language code identifier. For example, for English type `setup.exe /L1033`, for French type `setup.exe /L1036`, for German type `setup.exe /L1031`. and for Japanese type `setup.exe /L1041`. DO NOT leave a space between the `/L` and the 4 digit language code.

   `PIDKEY=M###############` is the product serial number.

   `ACCD=######` is the access code.

   `MPRO=True` creates the MapInfo Pro shortcut in the **Start** menu and sets the default file association of registered MapInfo Pro file types such as workspace (*.wor) or table (*.tab) with MapInfo Pro.

   `MVWR=True` creates the MapInfo Viewer shortcut in the **Start** menu. It also sets the default file association of registered MapInfo Pro file types such as workspace (*.wor) or table (*.tab) with the new MapInfo Viewer (subscription) if the `MPRO` parameter above is not set to `True`. For details of this new feature, see **MapInfo Pro Viewer**.

   Note: If both the `MPRO` and `MVWR` parameters above are set to `True`, `MPRO` takes precedence and MapInfo Pro would be the default application associated with MapInfo Pro registered file types such as workspace (*.wor) or table (*.tab).

5. When User Access Control displays on the dialog box, click **Allow** or **Yes**.

   For concurrent licenses, the license server name and port number parameters must be included:

```
SNAME="LicenseServerName"
LSPN="LicenseServerPortNumber"
```

Substitute the appropriate license server name and port number when you perform the silent install.

For detailed instructions on installing MapInfo Pro silently, see **Chapter 5: Silent Installation Procedures** from the **MapInfo Pro Install Guide**.

License Server Utility

If you have a previous version of the License Server Utility (LSU) installed to manage distributable licenses, then you must upgrade to the latest License Server Utility version 5.1. Using a previous version of the License Server Utility with MapInfo Pro 17.0.3 will cause MapInfo Pro to become unresponsive.

Using an incompatible version of the License Server Utility might result in the following issues while fetching licenses for MapInfo Pro:

- MapInfo Pro is unable to borrow a license.
- MapInfo Pro is unable to activate a distributed license from the License Server.

If this occurs, contact your License Server administrator and have them upgrade the latest License Server version.

After successfully borrowing or activating a license, if you again roll back to an older version of License Server Utility, you cannot transfer the borrowed/activated license back to License Server Utility. You will not see an error message as the operation simply hangs.

Repairing MapInfo Pro from the .MSI file

The repair process fails using the .msi file when the Microsoft User Account Control (UAC) is turned on. Depending on the installation conditions the repair stops with the following error message:

> You have MapInfo Pro running, please close it and run setup again.

To work around this issue, do one of the following three things:

- Shut off the UAC (User Account Control), this requires System Administrative privileges, reboot the machine, and rerun the repair.
- Run the original `setup.exe` file and then run the repair from maintenance mode.
- Run the installed copy of the MapInfo Pro 17.0.3 .msi file as an administrator. Go to `C:\Windows\Installer` and search for the MapInfo Pro 17.0.3 .msi file. It will have a name

similar to `8e95f1.msi`, where the name is different for each machine. Go to `C:\Windows\System32` and find the `cmd.exe` file. Right click this file and select **Run as Administrator** (this may require an administrator password). Run the command `C:\Windows\Installer\nameofMiPro17.0.3.msi` and select **Repair** from maintenance mode.

Disabling User Account Control (UAC) on Windows 7 or Server 2008 R2

To disable UAC on Windows 7 or Server 2008 R2:

1. Launch **MSCONFIG** by from the **Run** menu.
2. In the **System Configuration** dialog box, click the **Tools** tab.
3. Click **Change UAC Settings**.
4. Click **Launch**.
5. Move the slider to **Never Notify**.
6. Click **OK** to close the dialog box.
7. Reboot the machine to have this change take effect.

Disabling User Account Control (UAC) on Windows 8.1 or Windows Server 2012 R2

To disable UAC on Windows 8.1 or Windows Server 2012 R2:

1. • On Windows 8.1, go to the **Search Charm** and type `Change User Account Control settings`.
   • On Windows 2012 R2, on the **Control Panel**, select **User Accounts**, and click on **Change User Account Control Settings**.
2. In the **User Account Control Settings** console, move the slider to **Never Notify**.
3. Click **OK**.

   You may see a prompt to confirm your selection or to enter an administrator password.
4. Reboot the machine to have this change take effect.

If the .NET Framework 4.6.1 or the Update for the .NET Framework 4.6.1 fails to install, then see **Correcting a MapInfo Pro Startup Issue on Windows 8.1 and Server 2012 R2**.

Disabling User Account Control (UAC) on Windows 10

To disable UAC on Windows 10:

1. On the **Control Panel**, select **User Accounts**, and click on **Change User Account Control Settings**.
2. In the **User Account Control Settings** console, move the slider to **Never Notify**.
3. Click **OK**.

Support Notices

SQL Server 2012

If connecting to a SQL 2012 server with Windows 7 or higher, use the SQL Server Native Client 2012 (also known as SQL Server Native Client 11.0).

Bing Maps Expiration Date

Bing Maps has a limited license period, which is specific to each version of MapInfo Pro. Bing Maps and the **Add Bing Roads to Map** and the **Move Map to** features cease working after this date:

- MapInfo Pro 17.0 on January 1st 2020
- MapInfo Pro 16.0 on January 1st 2018
- MapInfo Pro 15.0 and 15.2 on January 1st 2017

Customers with a current maintenance package who would like to continue to use earlier version of MapInfo Pro (11.0.x, 11.5.x, 12.0.x, or 12.5.x), are entitled to use Bing services. For details, contact your account representative.

Downloading Tools and Applications

The following web sites give access to MapInfo Pro documents, trials, and supporting materials:

- The MapInfo Pro page:
  www.pitneybowes.com/us/location-intelligence/geographic-information-systems/mapinfo-pro.html
- The MapInfo Pro support page:
  www.pitneybowes.com/us/support/products/mapinfo-pro-support.html

The following are applications that support working with MapInfo Pro:

MapInfo MapBasic	**www.pitneybowes.com/us/support/products/mapbasic-support.html** The MapBasic development environment is a complete, BASIC-like programming language used to create custom applications for use with MapInfo Pro or special MapInfo runtimes. MapBasic allows you to customize the geographic functionality of MapInfo Pro, automate repetitive operations and integrate MapInfo Pro with other applications.
MapInfo EasyLoader	**www.mapinfo.com/easyloader** EasyLoader lets you to upload MapInfo .tab files to a remote database, such as Oracle, SQL Server, Microsoft Access, and PostgreSQL / PostGIS.
MapInfo License Server	**www.pbinsight.com/support/product-downloads/item/mapinfo-license-server-utility-v4.9** The License Server handles requests for Pitney Bowes product licenses for MapInfo Pro. This is for distributable, concurrent, or borrowed licenses.

To install these downloads, unzip the download file to a temporary folder, navigate to the folder and then launch the `setup.exe`. An install wizard guides you through the installation process.

Locating Your Documentation

MapInfo Pro documentation, in the form of PDF files, installs with MapInfo Pro in to the `Documentation` sub folder (for example, `C:\Program Files\MapInfo\Professional\Documentation`). You must have the Adobe Acrobat reader installed to view PDF files. To download a free copy of the Adobe Acrobat Reader, go to **http://www.adobe.com**.

For instructions on installing MapInfo Pro, see the *MapInfo Pro Install Guide*. To access the *MapInfo Pro Install Guide* and other documents, launch the MapInfo Pro DVD autostart presentation by double clicking the `autostart.exe` in the root folder of the DVD and clicking **Online Reference** and **MapInfo Pro Install Guide**.

Documentation is also available on our website from **www.pitneybowes.com/us/support/products/mapinfo-pro-support.html**.

Installation Instructions are Available in the Install Guide

For system requirements, installation instructions, and System Administrator notes for performing a work group installation, see the *MapInfo Pro Install Guide*. From the software installer, click **Online Reference** and then **MapInfo Pro Install Guide**.

Instructions for Activating your License are in the Install Guide

Instructions for activating your MapInfo Pro license are in the *MapInfo Pro Install Guide*. The same information is also in the *Activating Your Product*. From the software installer, click **Online Reference** and then **MapInfo Pro Install Guide** or **Activating Your Product**.

The MapInfo Pro Data Directory Document

MapInfo Pro's sample data comes with the *MapInfo Pro Data Directory* document, which describes the sample data. From the software installer, click **Online Reference** and then **MapInfo Pro Data Directory**.

Sample Data Enhancements

To help you get started, Pitney Bowes Software Inc. provides you with some United States-based and world-wide maps you can use as a background to your data. To install the free data provided with MapInfo Pro see the section titled *Installing Data* in the *MapInfo Pro Install Guide*. For a description of the sample data supplied with this product, see the *MapInfo Pro Data Directory* document.

Open Source Attribution

This product contains GeoJSON.NET, which is licensed under the MIT license. The license can be downloaded from **https://github.comGeoJSON-NET/GeoJSON.NET/blob/master/LICENSE.md**. The source code for this software is available from **https://github.com/GeoJSON-Net/GeoJSON.Net**.

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