

Tips and Tricks 1

4A

In this session you will find tips and tricks regarding:

- ◆ Excel Files
 - ◆ Adding Leading Zeroes
 - ◆ Various MapInfo Professional Tools
 - ◆ Adding the Current Date to a Layout
 - ◆ Updating Columns
 - ◆ Wildcard Characters
 - ◆ Various SQL Queries
 - ◆ Labels
 - ◆ Thematic Maps
 - ◆ Symbol Settings
 - ◆ And many more!
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- ◆ Feel free to share any good gambling tips!

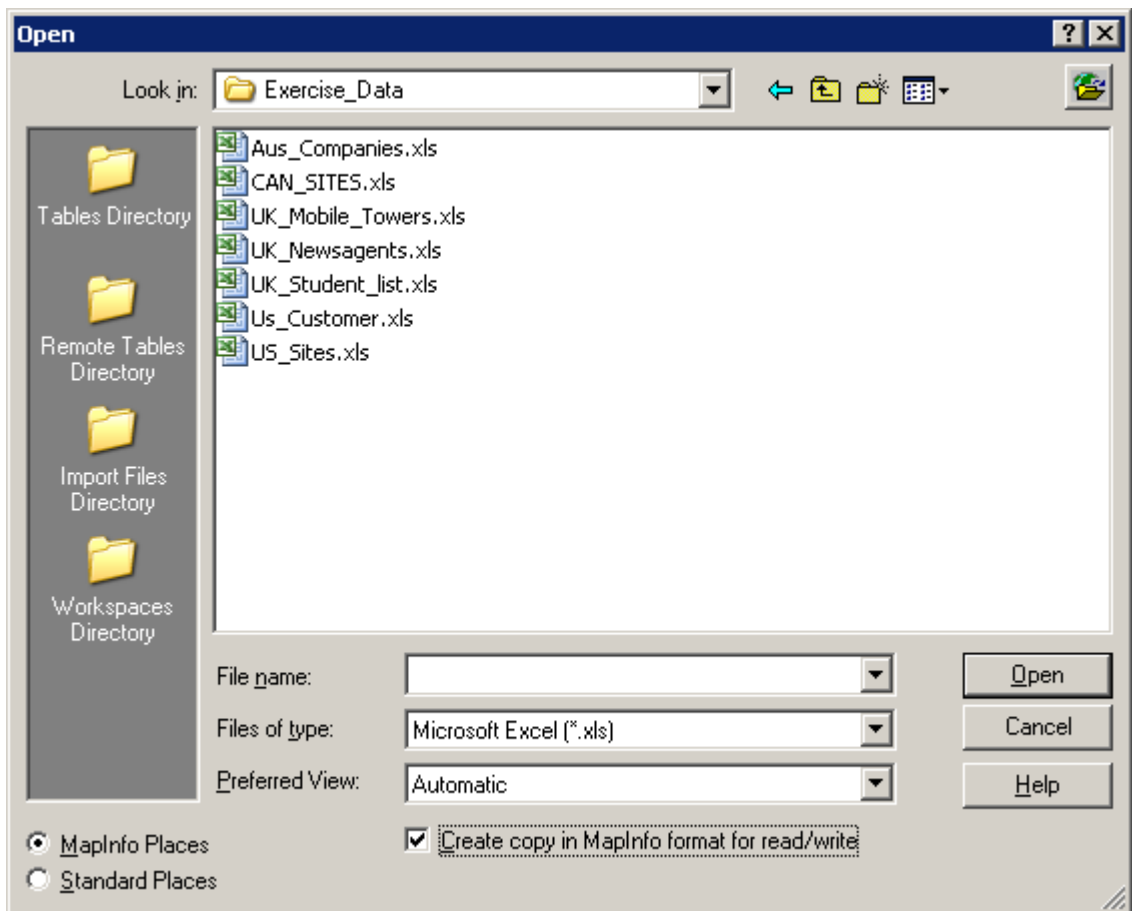
Question:

How do I open an excel document as a native MapInfo table to allow data editing?

Answer:

Formerly, when comma delimited, Lotus 1-2-3, ASCII, and Excel files were opened in MapInfo Professional, they were read-only. To edit these files, it would be necessary to have to save a copy of the file to the native .tab format. There is an option to do this automatically when opening these types of tables. This should simplify the process of opening and working with files of these types.

1. From the **File** menu, click **Open** to display the **Open** dialog box.
2. In the **Files of type** drop-down list, select Microsoft Excel (*.xls), Delimited ASCII (*.txt), Lotus 1-2-3 (*.wk1, *.wks, *.wk3, *.wk4), or Comma Delimited CSV (*.csv) to display the list of available files of these types only.



3. Select a file from the list and select the **Create copy in MapInfo format for read/write** to open it in native (.tab) format.
4. Click **Open** to open the file.

Question:

How to add leading zeros to a character field?

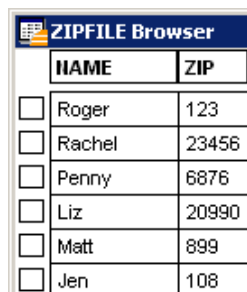
Answer:

When a ZIP Code field is imported into MapInfo as a number, the leading zeros will be eliminated causing bad results when geocoding. To fix this problem without re-importing, perform the following steps:

1. 1. Choose **Table>Maintenance>Table Structure** and select the table to modify.
2. 2. Change the type of the ZIP Code column to character. Change the width to 5.

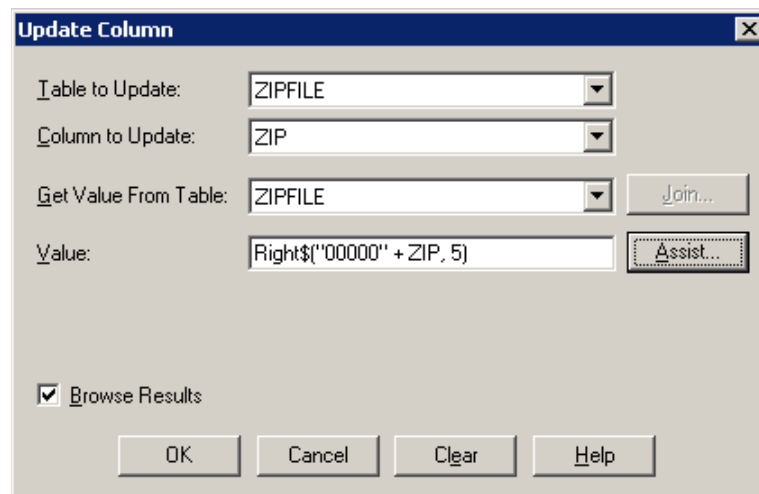
Note: If ZIP+4, change it to Character with a width of 9.

The table will now look as follows:



| NAME | ZIP |
|---------------------------------|-------|
| <input type="checkbox"/> Roger | 123 |
| <input type="checkbox"/> Rachel | 23456 |
| <input type="checkbox"/> Penny | 6876 |
| <input type="checkbox"/> Liz | 20990 |
| <input type="checkbox"/> Matt | 899 |
| <input type="checkbox"/> Jen | 108 |

3. 3. Choose **Table>Update Column** and set up the dialog as follows:



Update Column

Table to Update: ZIPFILE

Column to Update: ZIP

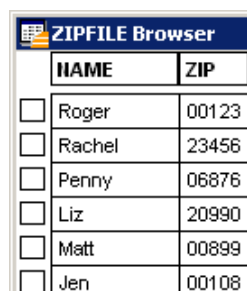
Get Value From Table: ZIPFILE

Value: Right\$("00000" + ZIP, 5)

Browse Results

OK Cancel Clear Help

4. 4. Click **OK**. The results will look as follows:



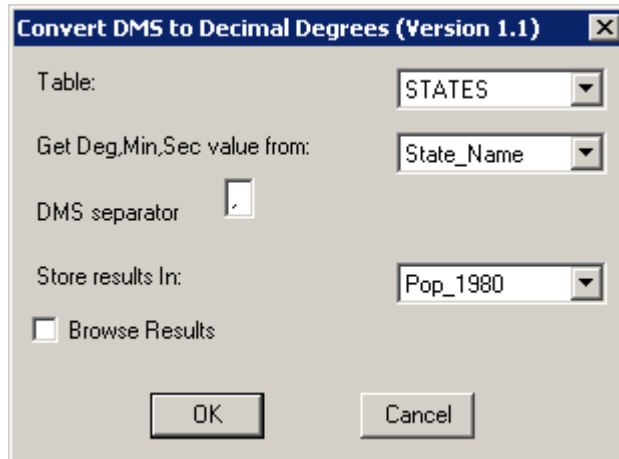
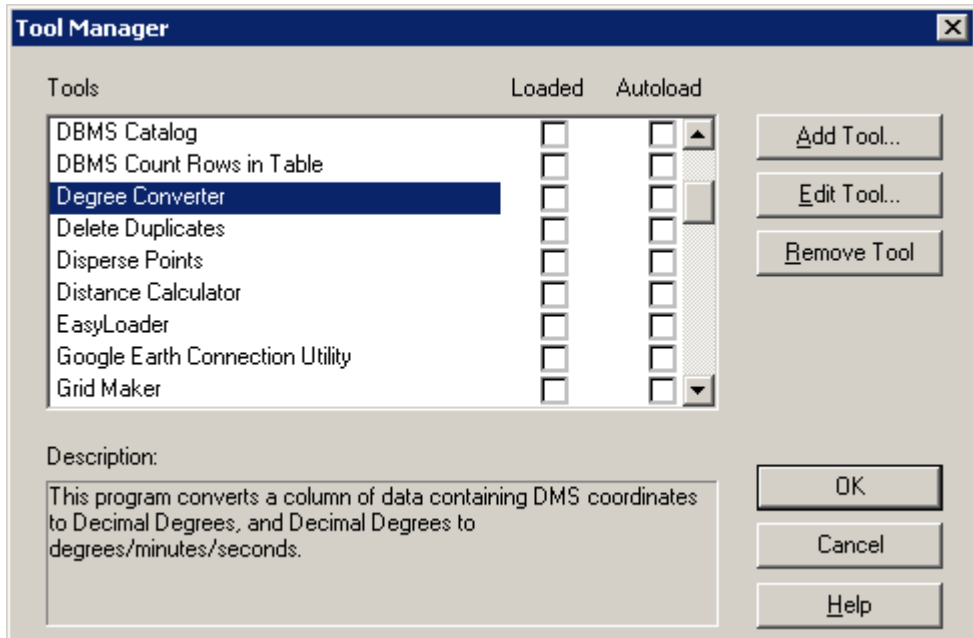
| NAME | ZIP |
|---------------------------------|-------|
| <input type="checkbox"/> Roger | 00123 |
| <input type="checkbox"/> Rachel | 23456 |
| <input type="checkbox"/> Penny | 06876 |
| <input type="checkbox"/> Liz | 20990 |
| <input type="checkbox"/> Matt | 00899 |
| <input type="checkbox"/> Jen | 00108 |

Question:

How can I convert degrees minutes seconds to decimal degrees?

Answer:

To convert columns to decimal degrees we will use the degree converter tool found in our **Tool Manager**.



Question:

Is there a way to change the font size, color, or viewable columns in a browser view without modifying the table structure?

Answer:

Using the **Browse>Pick Fields** menu option will allow modification of the viewable columns in a browser view without modifying its structure. Selecting all with **Query>Select All** and using the **Options>Text Style** menu option will allow changes to be made to the color and font attributes of the browser window. Also, using **Browse>Options** will provide an option to remove gridlines.

- **Fields in Table**
Displays a list of the fields in the current table.
- **Add**
Add a field to the Browser window.
- **Remove**
Remove a field from the Browser window.
- **Columns in Browser**
Displays a list of the columns currently displayed in the Browser window.
- **Up**
Moves the chosen item in Columns in Browser up one column.
- **Down**
Moves the chosen item in Columns in Browser down one column.
- **Edit Browser Column**
Allows a Browser column to be renamed or display an expression as a Browser column.
- **Name**
Use this box to temporarily rename a Browser column.
- **Expression**
Use this box to display an expression as a Browser column.
- **Assist**
This button accesses the Expression dialog box where an expression can be specified.

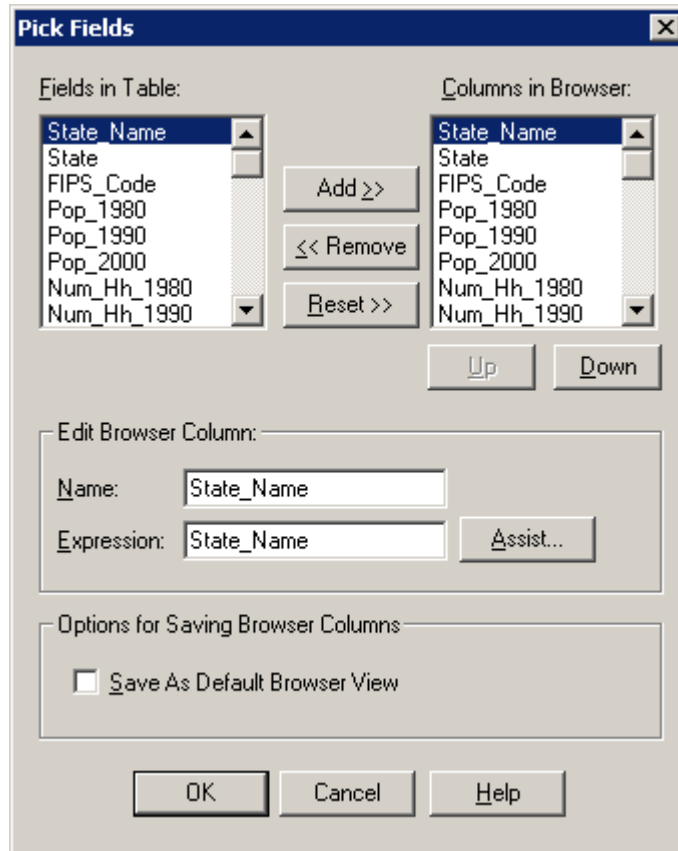
Question:

Is there a way I can only show certain columns in a browser every time I browse my table?

Answer:

A feature in MapInfo Professional gives you the ability to set a default browser view. For example if we choose not to see all the columns in the states table we can select our browse menu and pick fields. This will allow us to select just the fields we choose to view.

Note: There is a check box to **Save As Default Browser View**.

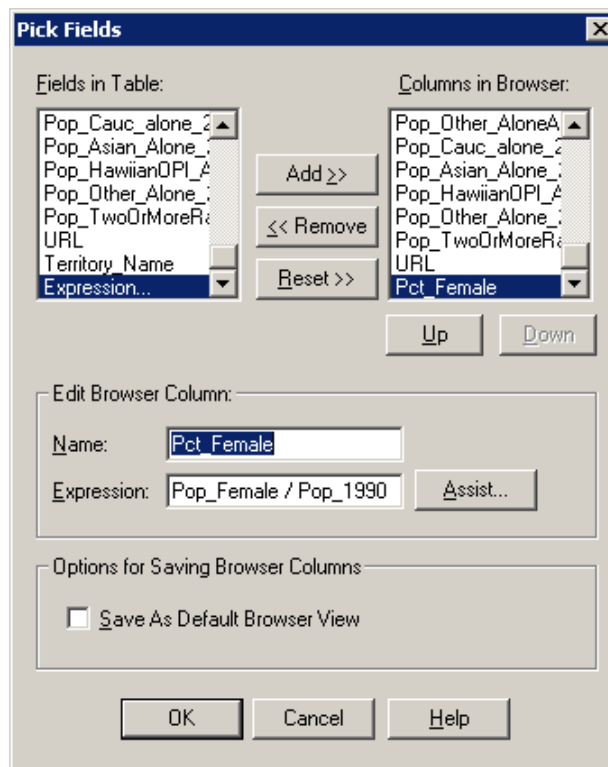
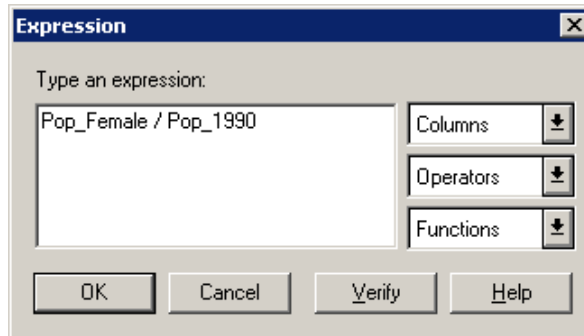


Question:

What if I want to view derived data within the browser window?

Answer:

We can build an expression to view derived data within the browser window.



| Pct_Female |
|------------|
| 0.520822 |
| 0.47301 |
| 0.505981 |
| 0.517989 |
| 0.499408 |
| 0.504827 |
| 0.515419 |
| 0.515185 |
| 0.500745 |

Question:

How can I update a subset of my table?

Answer:

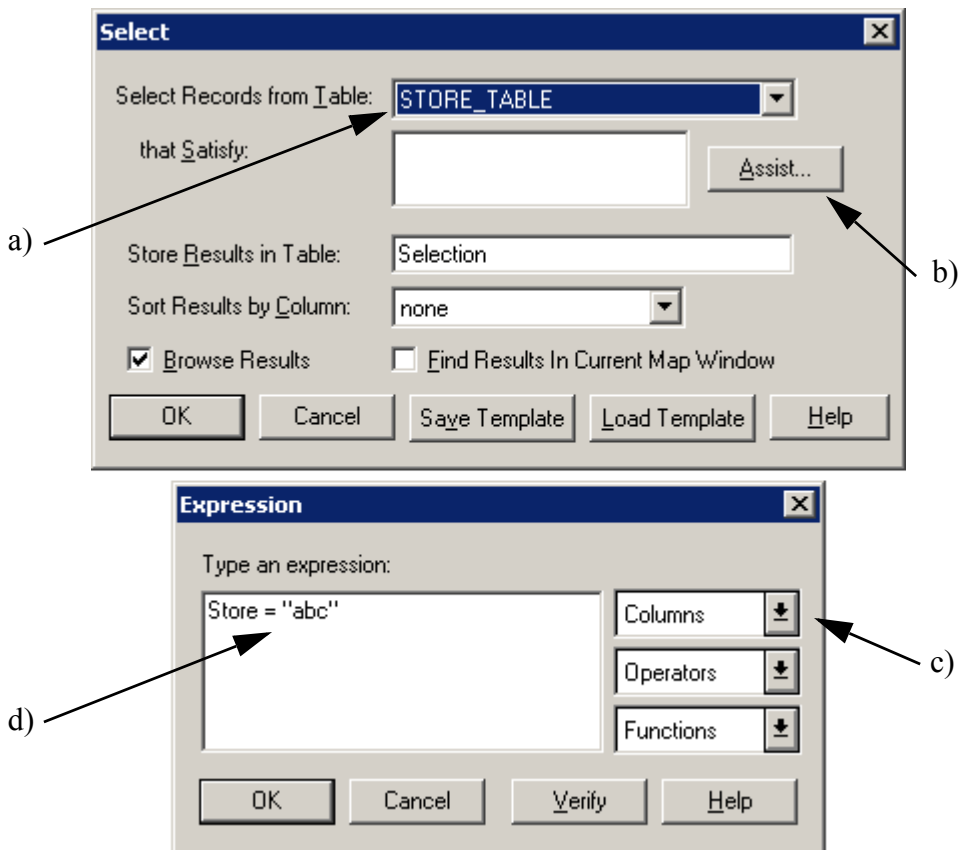
When a table contains multiple records, and there is a need to update certain records that have matching criteria, this can be done using SQL.

Here is an example:

| | Store | ZIP | Color |
|--------------------------|-------|-------|--------|
| <input type="checkbox"/> | abc | 12180 | red |
| <input type="checkbox"/> | abc | 12180 | blue |
| <input type="checkbox"/> | xyz | 12180 | green |
| <input type="checkbox"/> | abc | 12061 | yellow |

Assume that you would like to update all stores that are "abc" to their new color of pink.

1. Select the stores from the STORE_TABLE using **Query>Select**.



- a. Choose the correct table to select from

- b. Click **Assist**.
 - c. Choose the correct column from the **Columns** list.
 - d. Finish the expression by entering an equals sign, followed by what you are trying to match, contained in double quotes, as seen above.
2. Click **OK** twice.

This will open a query of just the specified stores.

Now we will update the color column to be pink.

3. Choose **Table > Update Column**

The 'Update Column' dialog box is shown with the following settings:

- Table to Update:** Query1
- Column to Update:** Color
- Get Value From Table:** Query1
- Value:** "pink"
- Browse Results

- **Table to Update** should be the query, in this case, **Query1**.
 - **Column to Update** should be the column that contains what we want to update. In this example, we are choosing **Color**.
 - **Get Value From Table** will also be the query table.
 - **Value** will be what we want to change it to. If this is being updated with any characters, be sure to enclose the value in double quotes.
4. Click **OK**.

Now if we look at the original STORE_TABLE, we will see that the values are updated.

| STORE_TABLE Browser | | | |
|---------------------|-------|-------|-------|
| | Store | ZIP | Color |
| ■ | abc | 12180 | pink |
| ■ | abc | 12180 | pink |
| □ | xyz | 12180 | green |
| ■ | abc | 12061 | pink |

| Query1 Browser | | | |
|----------------|-------|-------|-------|
| | Store | ZIP | Color |
| ■ | abc | 12180 | pink |
| ■ | abc | 12180 | pink |
| ■ | abc | 12061 | pink |

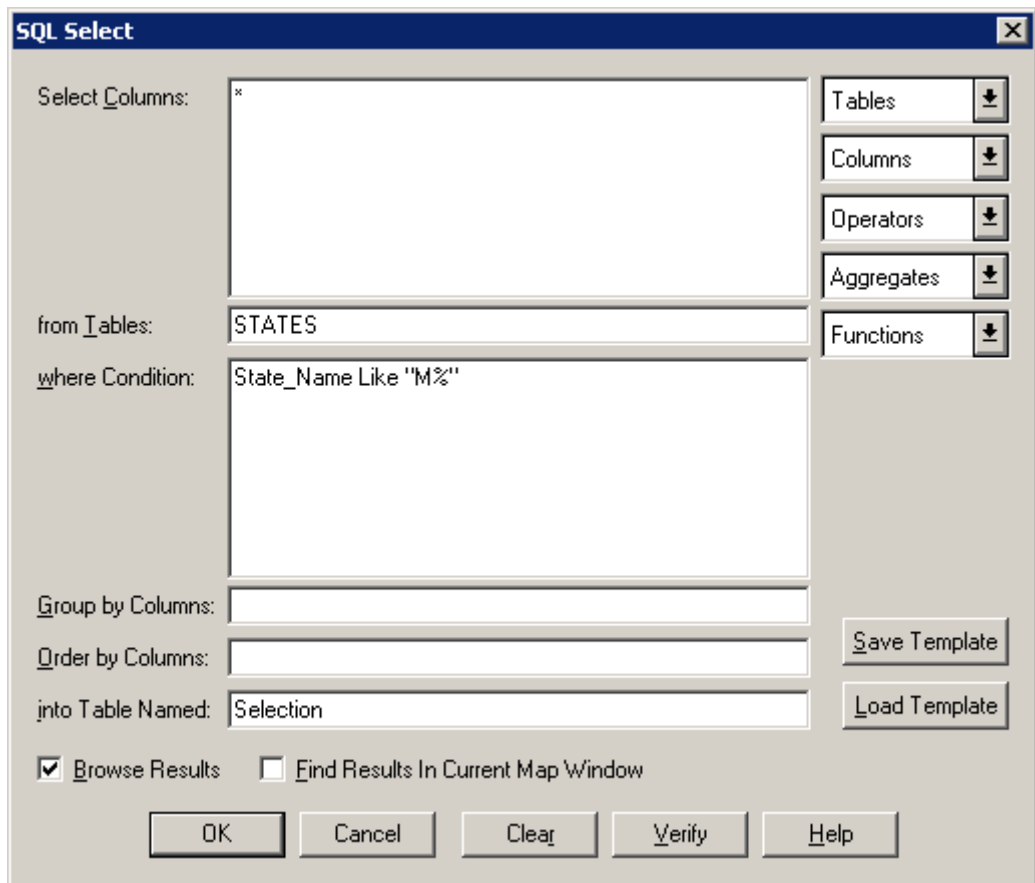
Question:

How do I select using a wildcard?

Answer:

When you don't know the full string of text you can use a wildcard. For example, you select all the records that start with a certain letter.

1. Choose **Query > SQL Select**.
2. The like operator has two wildcards available: the “%” character and the “_” character. The “%” is used for any sequence of characters while the “_” is for any single character. The following query will select all States that begin with the letter “M.”



You can also use two wildcard characters in a single condition. For example, if you used `State_Name like "%m%"` you would get all the States that had the letter 'm' anywhere in the name, not just at the beginning.

Question:

How to select all objects of a certain type? For example, how to select all the line objects in a table?

Answer:

1. Choose **Query>SQL Select**.
2. Specify the table name in the **From Tables** box.
3. Click in the **Where Condition** box.
 - a. From the **Functions** list, choose the **STR\$()** function.
 - b. Within the parentheses, type in `obj`.
 - c. Outside of the parentheses, type the equals sign.
 - d. In quotes, put the object type to be selected.

For example:

```
Where Condition: Str$(obj)="Line"
```

Tip: Any of the following object types may be used in the query: "Point", "Multipoint", "Line", "Polyline", "Region", "Collection", "Rectangle", "Rounded Rectangle", "Arc", "Ellipse", or "Text".

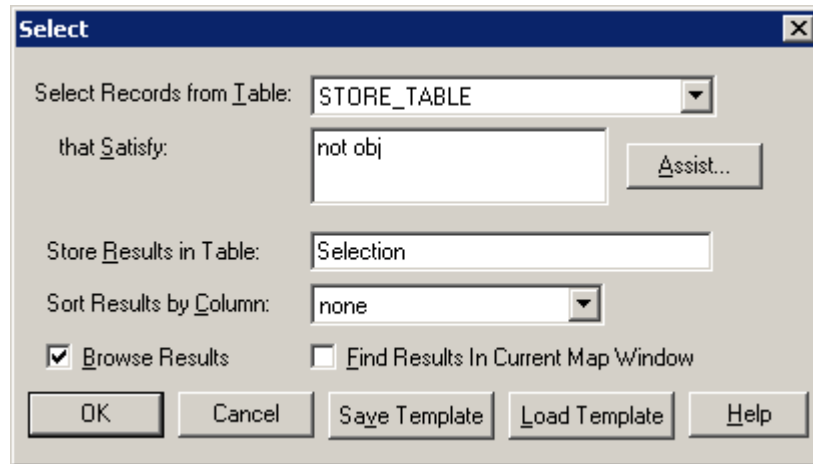
Note: `Str$(obj)` will return a null string if there is no object associated with a row. To select all rows in a table that have no associated map object (e.g., all ungeocoded rows after a geocoding operation) use the **where Condition** `Str$(obj)=""`. However, using the **where Condition** `not obj` is another method and is probably faster than a string comparison to find an empty string.

Question:

Can a selection be run to find all records in a table that didn't geocode or don't have an object associated with the record?

Answer:

To find all the records that don't have an object or were not geocoded, use the following SQL Select statement (**Query>Select**):



Substitute the desired table that the selection is to be run on in the **Select Records from table** drop down list. The resulting query table will contain only those records without a geographic object associated with them (i.e., records that didn't geocode).

Question:

How to select using a wildcard in SQL Select where it is desired to find records with two different search strings?

Answer:

The following **SQL Select** dialog box shows how to select all State names that start with "ar" or "ne" using a wildcard.

The screenshot shows the "SQL Select" dialog box with the following configuration:

- Select Columns:** *
- from Tables:** STATES
- where Condition:** State_Name Like "ar%" or State_Name Like "ne%"
- Group by Columns:** (empty)
- Order by Columns:** (empty)
- into Table Named:** Selection
- Browse Results
- Find Results In Current Map Window

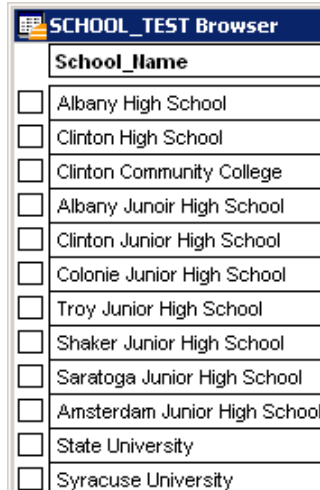
Buttons at the bottom: OK, Cancel, Clear, Verify, Help. On the right side, there are dropdown menus for Tables, Columns, Operators, Aggregates, and Functions, along with Save Template and Load Template buttons.

Question:

How to find records using like, not and the percent sign as a wildcard.

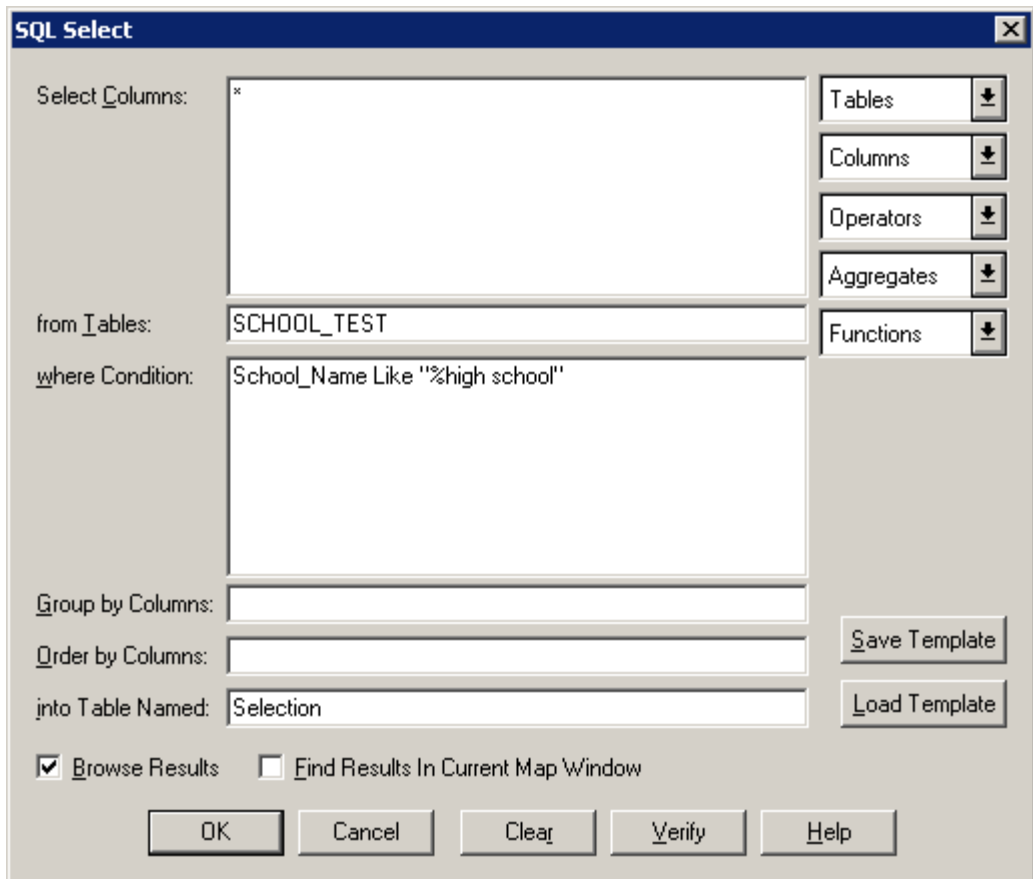
Answer:

In this example, the following records will be used:



| SCHOOL_TEST Browser | |
|--------------------------|------------------------------|
| School_Name | |
| <input type="checkbox"/> | Albany High School |
| <input type="checkbox"/> | Clinton High School |
| <input type="checkbox"/> | Clinton Community College |
| <input type="checkbox"/> | Albany Junoir High School |
| <input type="checkbox"/> | Clinton Junior High School |
| <input type="checkbox"/> | Colonie Junior High School |
| <input type="checkbox"/> | Troy Junior High School |
| <input type="checkbox"/> | Shaker Junior High School |
| <input type="checkbox"/> | Saratoga Junior High School |
| <input type="checkbox"/> | Amsterdam Junior High School |
| <input type="checkbox"/> | State University |
| <input type="checkbox"/> | Syracuse University |

To query the table of schools above for any records having High School in the school name, use the percent sign (%) as a wildcard in front of the words High School as shown in the SQL dialog box below. This will return any record with the words High School in it.



SQL Select

Select Columns: *

from Tables: SCHOOL_TEST

where Condition: School_Name Like "%high school"

Group by Columns:

Order by Columns:

into Table Named: Selection

Browse Results Find Results In Current Map Window

Tables ↓
Columns ↓
Operators ↓
Aggregates ↓
Functions ↓

Save Template
Load Template

OK Cancel Clear Verify Help

However, this query also returns all the Junior High Schools.

To refine the query and find only High Schools and not Junior High Schools, use "not" as shown in the SQL dialog box below.

The screenshot shows the "SQL Select" dialog box with the following fields and options:

- Select Columns:** *
- from Tables:** SCHOOL_TEST
- where Condition:** School_Name Like "%high school" and School_Name not like "%junior high school"
- Group by Columns:** (empty)
- Order by Columns:** (empty)
- into Table Named:** Selection
- Options:** Browse Results, Find Results In Current Map Window
- Buttons:** OK, Cancel, Clear, Verify, Help
- Right Panel:** Tables, Columns, Operators, Aggregates, Functions (all with dropdown arrows), Save Template, Load Template

Question:

When joining two tables in the **Query>SQL Select** dialog box, which table should be listed first in the **From Tables** section?

Answer:

When joining mappable tables, the map objects associated with the first table listed will determine the map objects of the resultant query.

For example, if `Table1` is made up of **points** and `Table2` is made up of **regions**, and `Table1` is listed first, the resultant query will be made up of **point** objects that satisfied the **where Condition**. This will be the case whether it's a geographical join like `Table1.obj within Table2.obj`, or a columnar join like `Table1.Zipcode = Table2.Zipcode`.

If `Table2` is listed first, the resultant query will be made up of **regions** that satisfied the **where Condition**.

The order of columns in the resultant query will be the columns from the first table listed followed by the columns from the second table listed, if **Select Columns** is set to the default of an asterisk (*) which means the query will return all columns from both tables.

If the first table listed is not a mappable table, the map objects of the resultant query will be determined by the next mappable table listed.

Note: When joining a mappable table to a non-mappable table, only records from the mappable table are selected. This can cause problems when performing an outer join query to find records in the non-mappable table. The solution is to make the non-mappable table mappable via **Table>Maintenance>Table Structure** and checking the **Table is Mappable** check box. Then, a join will select records from both tables, allowing the ability to perform an invert selection to select all records from the previously non-mappable table, if it is listed first in the **From Tables** section.

If neither table is mappable, the order of the tables listed will only affect the order of the columns in the resultant query.

| First Table Listed in "From Tables" | Second Table Listed in "From Tables" | Resultant Query Map Objects |
|-------------------------------------|--------------------------------------|--|
| Mappable Table (i.e. Points) | Mappable Table (i.e. Regions) | Map Objects Associated with First Table (i.e. Points) |
| Mappable Table (i.e. Regions) | Mappable Table (i.e. Points) | Map Objects Associated with First Table (i.e. Regions) |
| Non-Mappable Table | Mappable Table | Map Objects Associated with Mappable Table |
| Non-Mappable Table | Non-Mappable Table | N/A |

Question:

Is it possible to create line objects from a table of coordinates?

Answer:

The following command can be used to convert a table of coordinates to a table of lines. The table must contain the coordinates for the beginning and the end of the line. It is very important to make any changes on a copy of the table; it may be necessary to use the original data at a later time.

To execute the command to convert the points to lines or create lines for the table:

1. Open the MapBasic Window through **Options>Show MapBasic Window**.
2. Type in the following command (all on one line) and press **ENTER**.

```
update point_table set obj=createline(Start_X,  
Start_Y,End_X,End_Y)
```

Caution: Be sure to substitute 'point_table' with the name of your table.

Start_X, Start_Y, End_X and End_Y represent the columns in point_table that have the starting and ending coordinates for each line.

Important Notes:

- Before proceeding with the update, make sure that the table in which the lines will be stored is mappable. To make the table mappable, make sure the **Table Is Mappable** box is checked. (**Table>Maintenance>Table Structure**)
- If a layout window was opened in this session of MapInfo, re-start MapInfo and then execute the command before opening another layout window.
- If the table being used is projected, the line objects may not be created properly. To work around this situation, open up a new map window of a table in a different projection than the one the table being used in this operation is in. Choose **Map>Options** and click **Projection**. Choose the projection of the table the create lines operation is being used on. Click **OK**. Then, execute the MapBasic command and the lines should be created correctly.

Question:

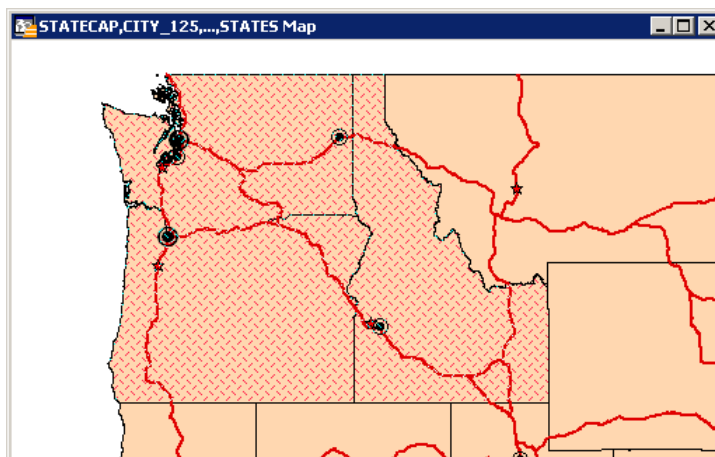
How can a clip region be set on more than one map object?

Answer:

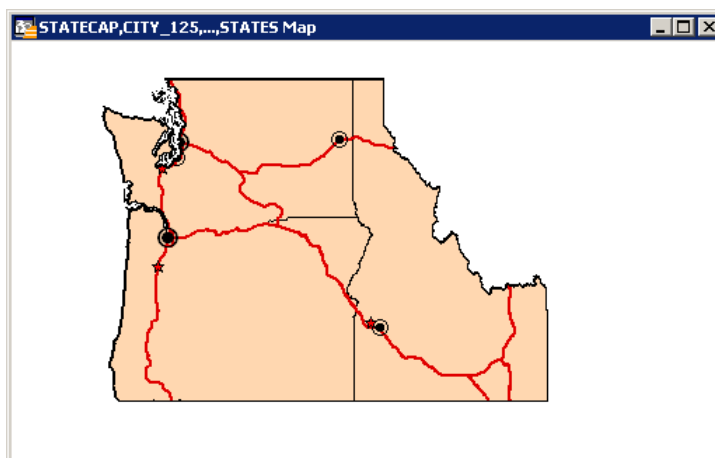
The Set Clip Region command isolates a single region of a map such as a State, county or one defined using a drawing tool for display and/or printing. If multiple regions need to be clipped, these regions will need to be combined into a single region or a drawing tool will be needed to trace around the group of regions to be clipped.

A better alternative is to create a buffer around the selected regions with a radius value of zero and use the resulting buffer object as the clip region.

1. Make the Cosmetic Layer editable through **Map>Layer Control**.
2. Select the regions to be clipped. (If using the Select tool located from the Main tool bar, hold the Shift key down while selecting the regions.)



3. Once the regions are selected, choose **Objects>Buffer**.
4. In the **Buffer Objects** dialog box, set the Radius value to zero and choose **One buffer of all objects**.
5. Click **OK**.
6. Now choose **Map>Set Clip Region**. Choose either to retain or discard the object used for clipping in the cosmetic layer.



Question:

How can the title of a map window be changed?

Answer:

There is a tool under **Tools>Tool Manager** called **Map Window Manager**. Once it is loaded, go to **Tools>Map Window Manager>Set Window Title** and enter the new desired title.

Alternatively, type the command below into the MapBasic window and press **ENTER**:

```
Set Window FrontWindow() title "My Mapper"
```

Be sure to substitute "My Mapper" with the desired title.

Question:

How to find the missing Info Tool?

Answer:

If clicking on the map with the Info Tool and the Info Tool window is not appearing, first ensure that an object (point, polyline or polygon) is being clicked on with this tool. If the Info Tool window still does not appear, then it is off the screen. The following steps will restore the Info Tool window.

1. Run Notepad in Windows.
2. Type in the following lines:


```
!Workspace
!Version 400
set window info show
set window info position (1.5,2.0) units "in"
```
3. Choose **File>Save**. Change the directory to the MapInfo program directory. Save the file as `INFOTOOL.WOR`.
4. Start MapInfo if it is not already open. Choose **File>Open** and open `INFOTOOL.WOR`.

The info tool window will re-appear on the screen.

Also, these two lines can be typed into the MapBasic Window to display the Info Tool window:

```
set window info show
set window info position (1.5,2.0) units "in"
```

Question:

How is zoom layering turned on and off?

Answer:

This is done through Layer Control.

1. Choose **Map>Layer Control**.
2. Select the layer for which the Zoom Layering needs to be set.
3. Click **Display** on the right.
4. In the **Display Options** dialog box, check the box next to **Display within Zoom Range** and enter the minimum and maximum zoom.
5. Click **OK**.

Objects will only appear when the zoom of the Map Window is between the minimum and maximum values.

To turn Zoom Layering off, uncheck the box next to **Display within Zoom Range** in the **Display Options** dialog box.

Note: The first check box under Layer Control will display a pink check in the box if the zoom of the map is outside the range for that layer.

Note: Raster and Grid files may be brought into MapInfo with automatic zoom control. This is done through **Options>Preferences**. Then, click **Map Window**.

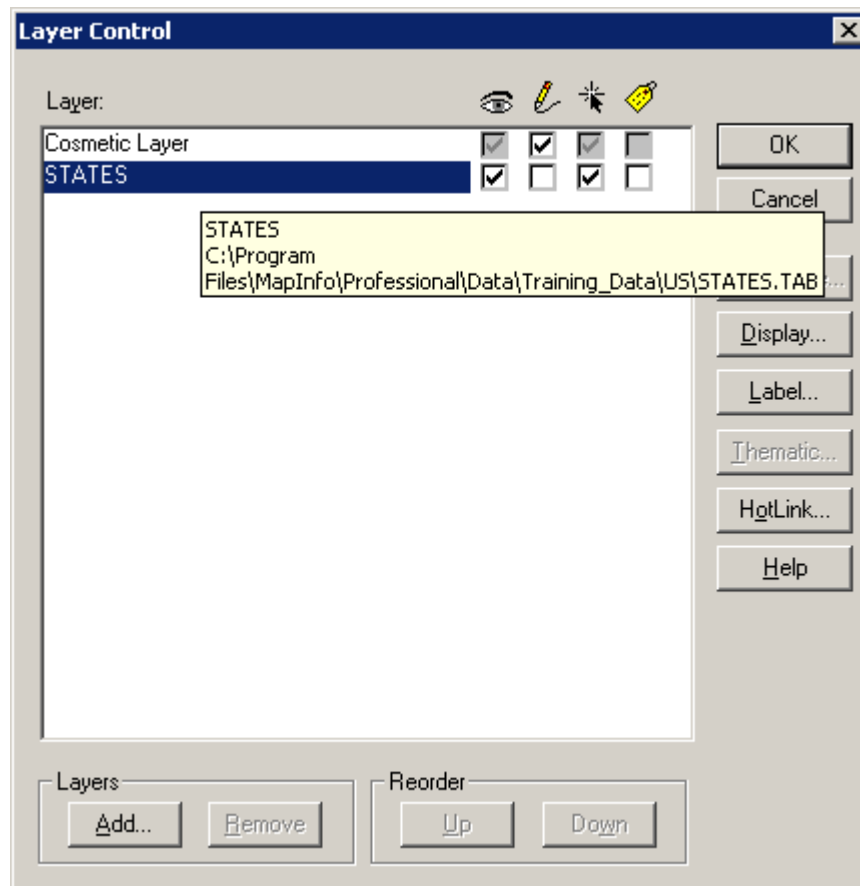


Question:

Layer Control shows more layer information using ToolTips.

Answer:


When working with files with long names, being able to see the whole file name is important. The Layer Control dialog box has increased in size to display longer file names and a ToolTip has been added to ensure that even longer file names can be read.

**Question:**

What if I want to merge two maps together into one map window?

Answer:

We can drag two map windows together to merge into one map window using the Drag Map

Window tool on your toolbar. 

You simply click and drag from one window to the other.

Note: When you merge maps together the merged map will take on the map settings of the destination map. If you have custom labels it would be in your best interest to check the map's projection to make sure it is the same as the destination map's projection.

Question:

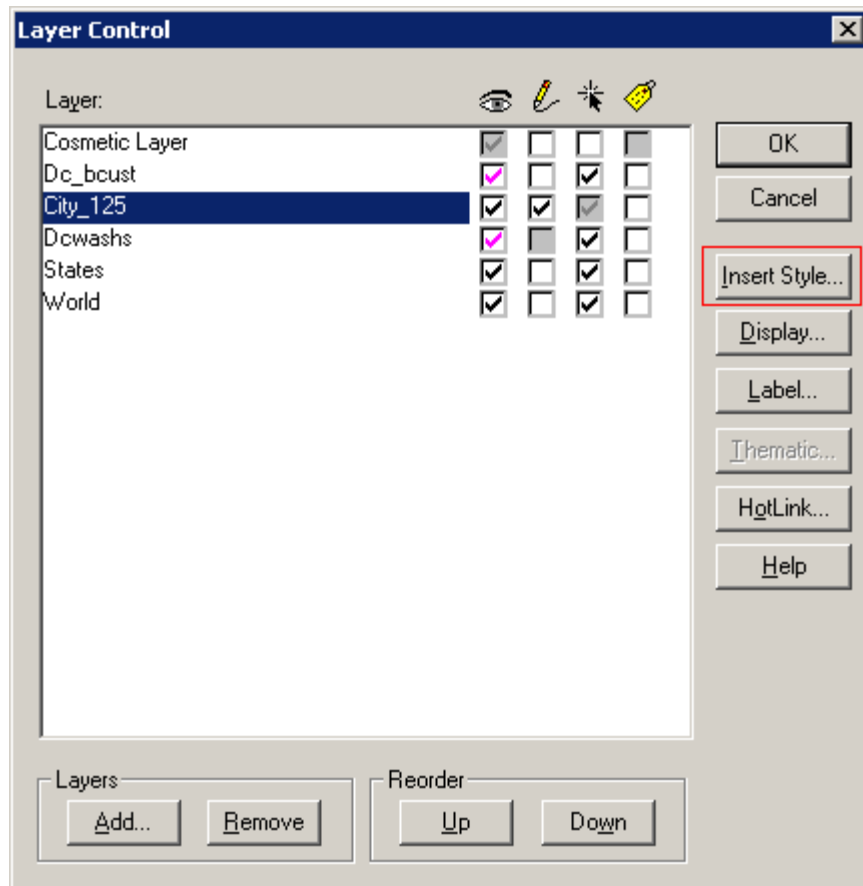
How do I insert a style into my table?

Answer:

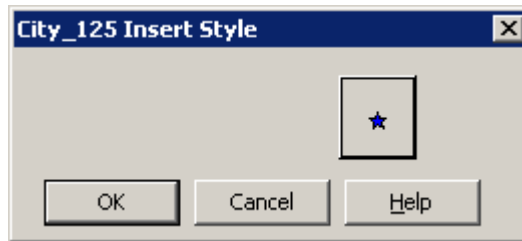
There are two kinds of styles in MapInfo Professional. Global styles are set in the **Style Preferences** dialog box and persist every time MapInfo Professional is started. Session styles are styles created during an edit session and only exist for that session. Session styles apply regardless of the table being edited. This new feature allows a table-based insert style to be defined that can be used to add new features to an editable table. The style information is saved as metadata in the table record and so persists beyond the session.

To insert a table-based style:

1. From the **File** menu, choose **Open** and select a map to display.
2. Open the **Layer Control** dialog box.
3. Make the desired layer editable. This enables the **Insert Style** button.



4. Click **Insert Style** to display the **Insert Style** dialog box.



If the layer selected contains a region style, the Symbol Style button displays as in this dialog box. It may also contain the Line Style button and the Region Style button, depending upon the type of layer being edited.

Note: Text Styles are currently not supported.

4. Click the button(s) in this dialog box to select the style options you want for this layer.
5. Click **OK** to save the style options you selected to the table.
6. Click **OK** in the **Layer Control** dialog box to display the styles on the current map.

To see this “persistent” quality of the insert style command, close MapInfo Professional. Then start MapInfo Professional again and display the map again.

Question:

Can I automatically open a thematic of a table?

Answer:

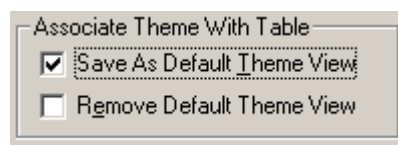
Yes. You first have to create the thematic map, being sure to specify two options in the process.

1. From the **Options** menu, choose **Preferences**.
2. Click **Map Window**.
3. Check the box to **Automatically Open Default Theme**.



This check box is cleared by default to ensure backwards compatibility.

4. During the creation of the thematic map, you will need to check the **Save As Default Theme View**. The default theme information will now be saved to the table’s metadata.



This will always open the thematic as the default theme view until you either turn off the preference in step 3, or choose **Remove Default Theme View**.

Note: If the table is read-only this option will be disabled.

Question:

What If I want to copy the information from the statistics window and past it into another application?

Answer:

MapInfo Professional enables you to copy the contents of the Statistics and Message windows to the clipboard. Before MapInfo Professional 8.5, you could not copy anything from these windows. With this enhancement you can now capture statistical information from your maps and specially written messages from MapBasic programs, and use that information in other applications through cut-and-paste operations.

Question:

How can I see the line when I autotrace an object?

Answer:

The autotrace line that traces the nodes of a polyline or polygon is thicker and darker. This should make the line more visible when you are tracing.

To see this change:




1. Open a Map layer for which you want to trace a polygon or polyline.
2. Make the layer editable.
3. Press the **S** key to turn on the Snap function and the **T** key to turn on the Autotrace functionality.
4. Select the Polygon or Polyline tool from the Drawing toolbar and click at the first node you want to trace.
5. Move the mouse along the nodes of the line or object you want to trace and you will notice the line is thicker.

Question:

How can I get a save workspace button on my toolbar?

Answer:

There are three toolbar buttons in MapInfo Professional to simplify opening and saving workspaces, and saving open windows.

- Open Workspace. Click this button to open a workspace. 
- Save Workspace. Click this button to save a workspace. 
- Save Window. Click this button to save the current window. 

Question:

What would cause the **Table > Geocode** option to be grayed out?

Answer:

If the geocode option is grayed out, make sure that:

- a. At least two tables are open; the table to be geocoded and the table being used to geocode against.
- b. The table being used to geocode against (search table) is mappable.

Question:

How do you create a label expression?

Answer:

Often it is desirable to create a label for an object with information that is contained in multiple columns. The best way to achieve this functionality is to create an expression that defines the label.

1. Choose **Map > Layer Control**
2. Click the **Label** button to bring up the **Label Options** dialog box.
3. From the **Label With** list, select **Expression**. At this point, enter in an expression.

The following examples are based on the CUST browser that is pictured below. Substitute the names of the columns below for the appropriate names from your data.

| CUST Browser | |
|----------------------------------|-----------|
| Name | Amount |
| <input type="checkbox"/> Liz | 2,348,978 |
| <input type="checkbox"/> Steve | 43,932 |
| <input type="checkbox"/> Sue | 73,429 |
| <input type="checkbox"/> Charlie | 1,234,567 |
| <input type="checkbox"/> Lois | 98,765 |
| <input type="checkbox"/> Chris | 3,456,675 |

- A string constant can be added to a column's contents to clarify the meaning of a label. The string constant must be contained by quotation marks. A plus sign is used to concatenate the text objects.

EXPRESSION: "Total Sales: "+Amount

This example will print the words "Total Sales" with a colon and a space, with the value in the Amount column.

- A multiple line label can be created by adding a carriage return to the expression where the next line is to begin. The carriage return is represented as CHR\$(13) in an expression.

EXPRESSION: Name+chr\$(13)+Amount

This example will print the name value with the amount value directly under it.

- The two techniques above can be combined to create very descriptive labels.
 EXPRESSION: "Name: "+Name+chr\$(13)+" Sales: "+Amount
 This example demonstrates one method of combining concatenations and carriage returns in an expression.

SAMPLE LABEL:

Name: Liz
 Sales: 2348978

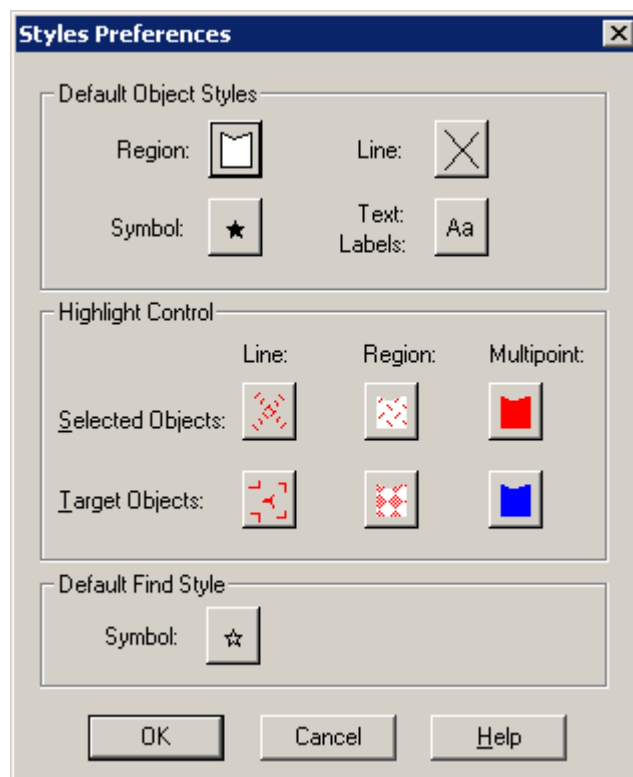
Question:

Can you set the default Find symbol style to use a specific symbol preference every time?.

Answer:

Yes, you can set a global symbol preference. It is also still possible to set the symbol for a particular map in the first **Find** dialog box.

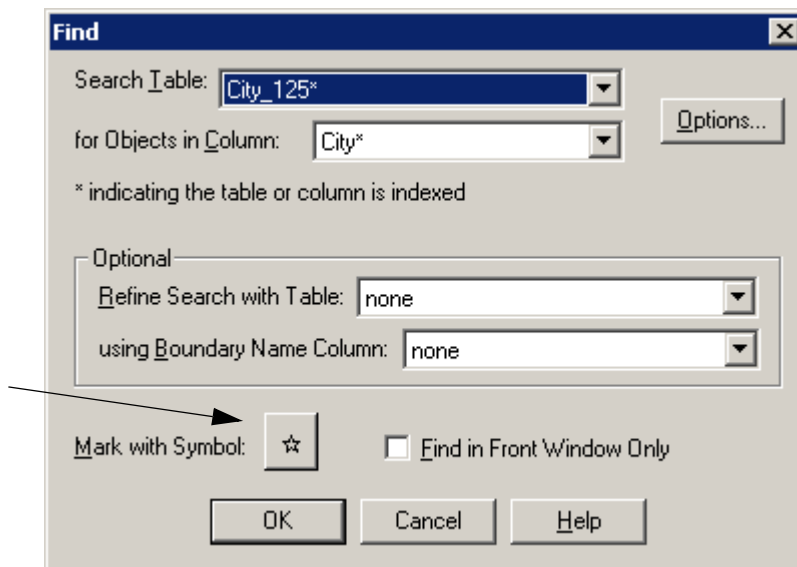
- From the **Options** menu, choose **Preferences**.
- Click **Styles** to display the **Styles Preferences** dialog box.



- In the **Default Find Style** area, click the **Symbol** button to display the Symbol Style dialog box.
- Select the new symbol style using the options in this dialog box and click **OK**.
- Click **OK** again to close the **Preferences** dialog box.

To change the Find symbol style locally:

1. Open a map.
2. From the **Query** menu, choose **Find** to display the **Find** dialog box.



Your global symbol choice will be displayed here. This is particularly helpful with busy or very low contrasting maps.

Note: There are two custom symbols that can be used for the Find functionality. They are the Find-01 and Find-02 bitmaps. To access these bitmaps, use the Custom Symbols symbol font.



Question:

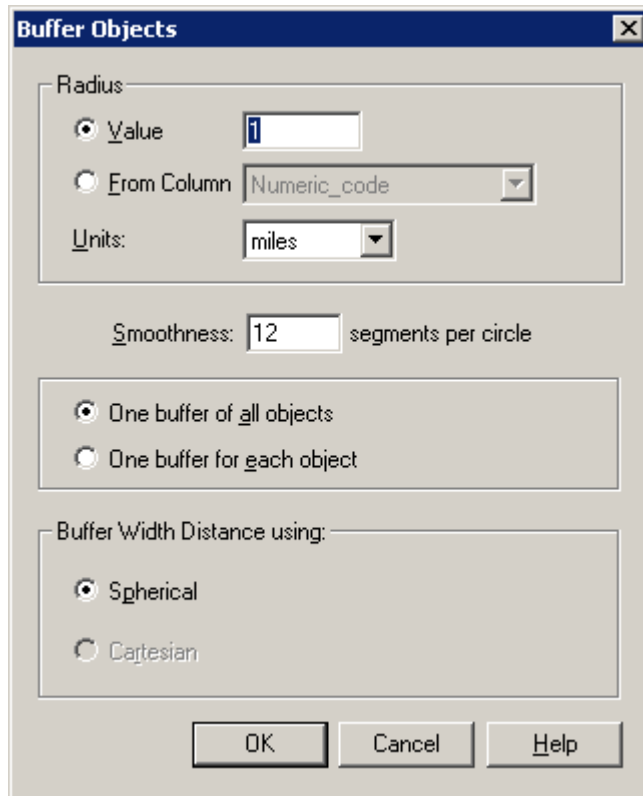
How do I create a table of buffers from my point table?

Answer:

1. From the **Table** menu, choose **Buffer**.
2. Choose the table for which you wish to create the buffers and store the results in a new table.



3. Set the field properties and save the new table. When this is complete you can now set the properties of the buffer.



Question:

Is it possible to return a count of how many points are in a polygon? For example, using a table of customers by ZIP Code, how can a count be returned of how many customers are within each ZIP Code?

Answer:

Select **Query > SQL Select** and fill in the dialog box as shown below. DC_ZIPS is a table of ZIP Code polygons and DC_BCUST is a table of customer points.

The screenshot shows the 'SQL Select' dialog box with the following configuration:

- Select Columns:** DC_ZIPS.ZIP_Code, Count(*)
- from Tables:** Dc_bcust, DC_ZIPS
- where Condition:** Dc_bcust.Obj Within DC_ZIPS.Obj
- Group by Columns:** DC_ZIPS.ZIP_Code
- Order by Columns:** (empty)
- into Table Named:** Selection
- Right-side menus:** Tables, Columns, Operators, Aggregates, Functions
- Buttons:** Save Template, Load Template
- Checkboxes:** Browse Results, Find Results In Current Map Window
- Bottom buttons:** OK, Cancel, Clear, Verify, Help

This query will return two columns; the ZIP Code and the count of the number of customers in each.

Question:

How do you create a thematic map using two columns at the same time? (This is known as a bivariate thematic map.)

Answer:

A bivariate thematic map uses point or line objects to represent two variables. For instance, a colored circle could represent a particular company while the size of the circle would represent the number of orders for that company. There are, however, limitations to this type of thematic mapping:

- At least one of the maps must be based on a numeric variable.
- There is a limit to using 2 ranged or 1 ranged and 1 individual variables.

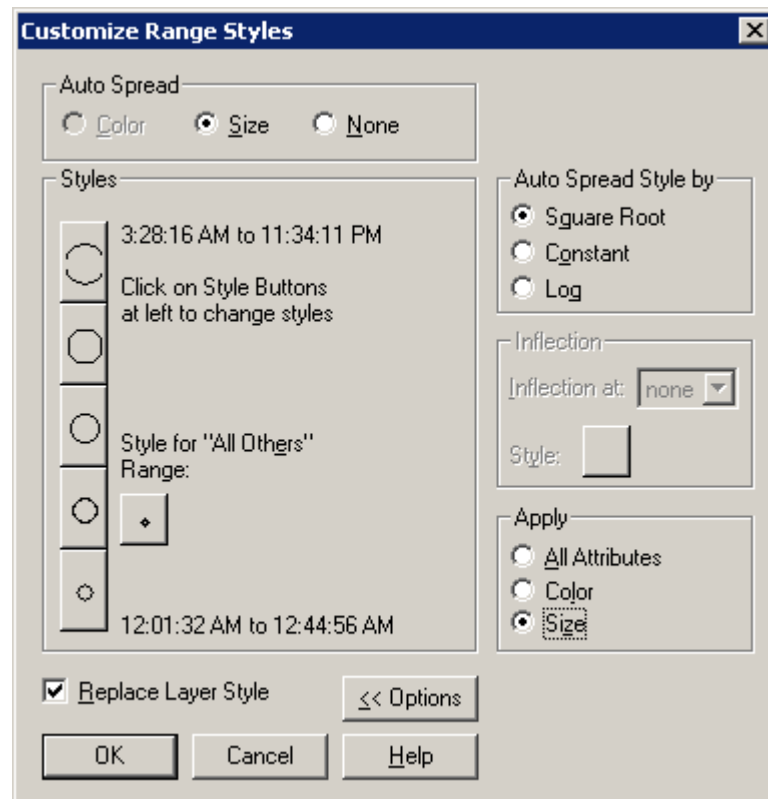
In the following example, the `CriminalActivity` table will be shaded by type of crime as well as the time the crime occurred.

First, create the Individual thematic map for the types of crimes:

1. Choose **Map > Create Thematic Map**.
2. In the **Create Thematic Map - Step 1 of 3** dialog box, choose **Individual** as the type and **Point IndValue Default** as the template and click **Next**.
3. In the **Create Thematic Map - Step 2 of 3** dialog box, choose the `CriminalActivity` table and choose the Type column. Click **Next**.
4. In the **Create Thematic Map - Step 3 of 3** dialog box, click **OK**.

Second, create the ranged thematic map based on the time the crime occurred.

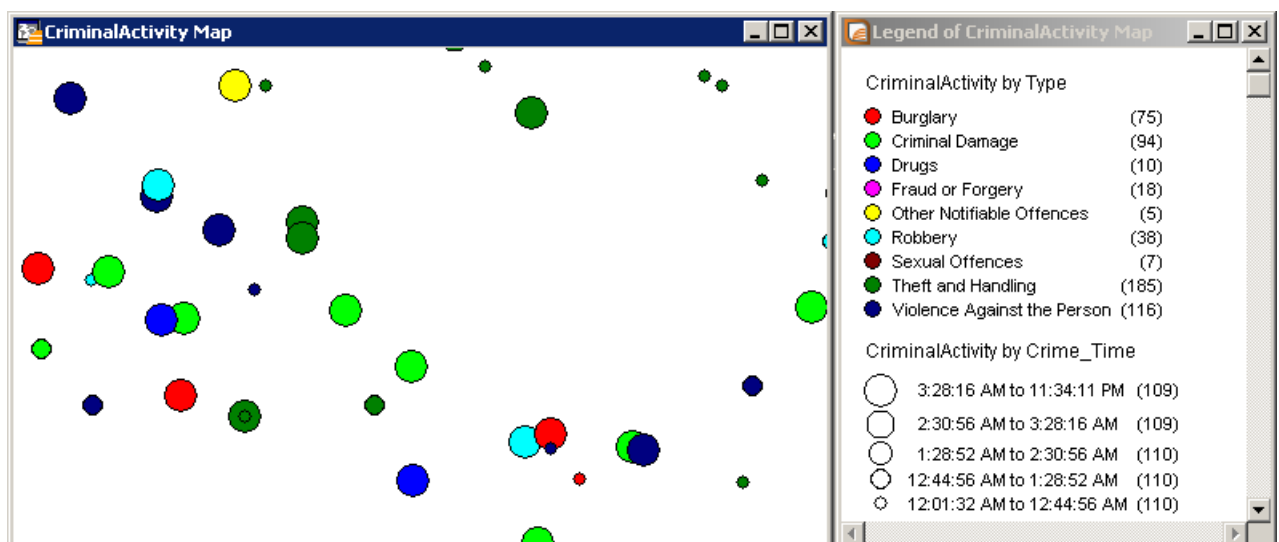
1. Choose **Map > Create Thematic Map**.
2. In the **Create Thematic Map - Step 1 of 3** dialog box, choose **Ranges** as the type and **Point Ranges, Varying Size** as the template. Click **Next**.
3. In the **Create Thematic Map - Step 2 of 3** dialog box, choose the `CriminalActivity` table and choose the Crime_Time column. Click **Next**.
4. In the **Create Thematic Map - Step 3 of 3** dialog box, click **Styles**.
5. In the **Customize Range Styles** dialog box, click **Options**.
6. In the **Apply** area, choose **Size**.



7. Click **OK**.

Tip: You may wish to adjust the ranges of time in Step 3 before proceeding. You can do this by clicking **Ranges**.

Click **OK** in the **Create Thematic Map - Step 3 of 3** dialog box. The resulting bivariate thematic map displays the type of crime by color and the time range by the size of the circle:



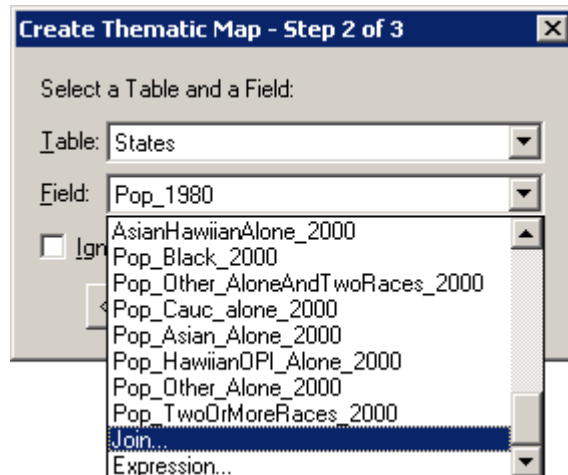
Question:

How can a region table be shaded based on the number of point objects falling within each region?

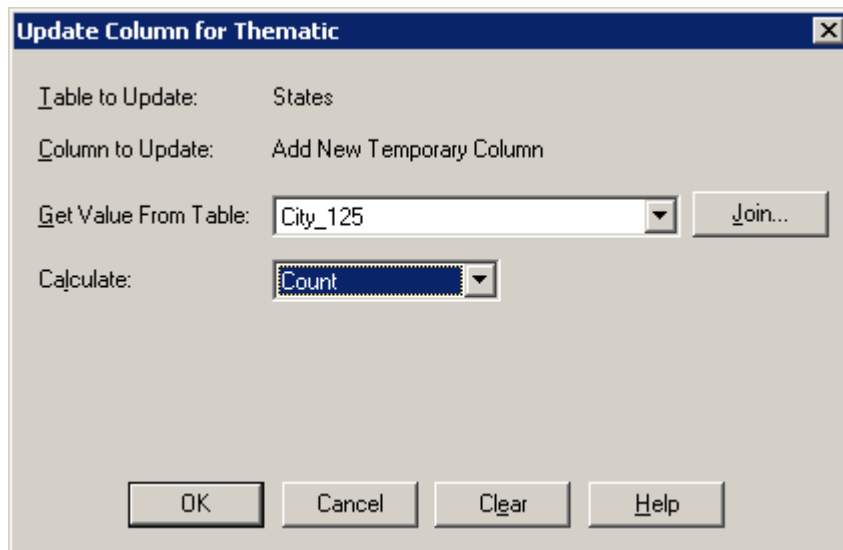
Answer:

Start with a region table (e.g., States) and a point table (e.g., City_125).

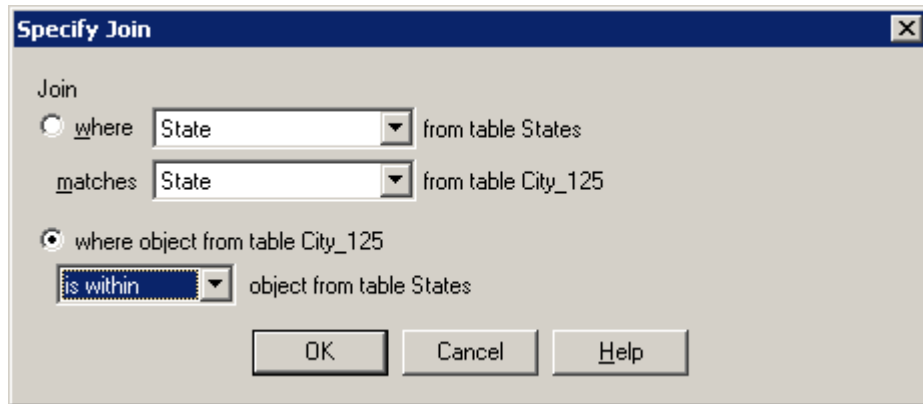
1. Choose **Map > Create Thematic Map** and select Ranges and a region range template
2. In the **Create Thematic Map - Step 2 of 3**, select the region table and from the Field list, choose **Join**.



3. From the **Get Value From Table** list, choose the point table, and from the **Calculate** list, choose **Count**.



4. Click **Join**.
5. Use the second option, and select where the object from the point table **is within** the object from the region table.



6. Click **OK** and **OK** to return to the Step 2 of 3 dialog box.
7. Check Ignore Zeroes or Blanks to prevent counts of zero (i.e., region objects with no points within them).
8. Click **Next**.
9. Make any necessary changes in Step 3 of 3 and click **OK**.

Question:

Can I the items in an Individual Value thematic legend in a custom order?

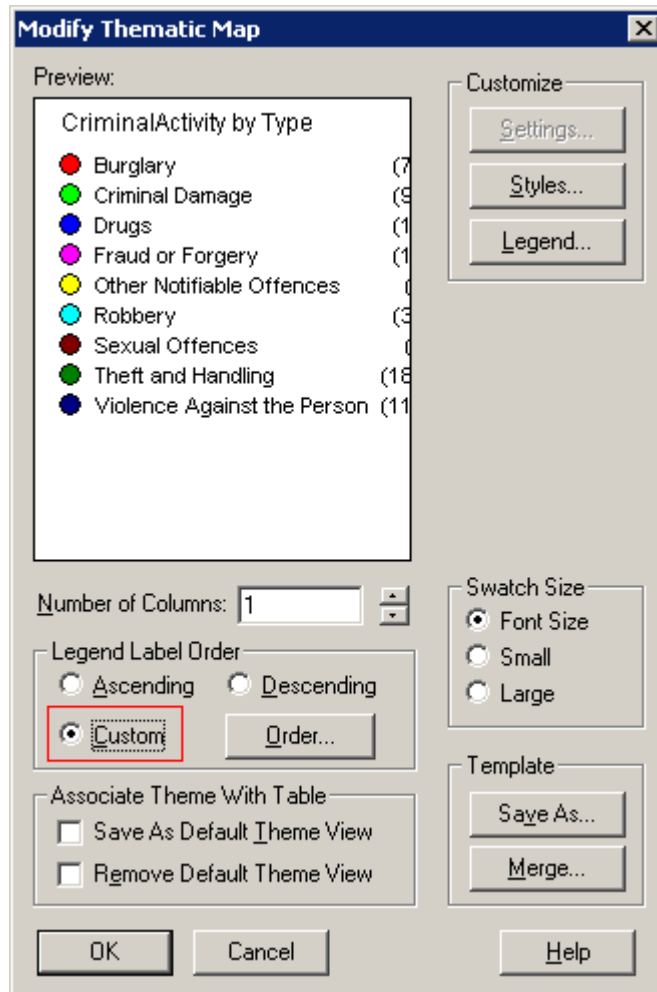
Answer:

There is a feature that allows the sort order to be changed in the legend list for Individual Value thematic maps.

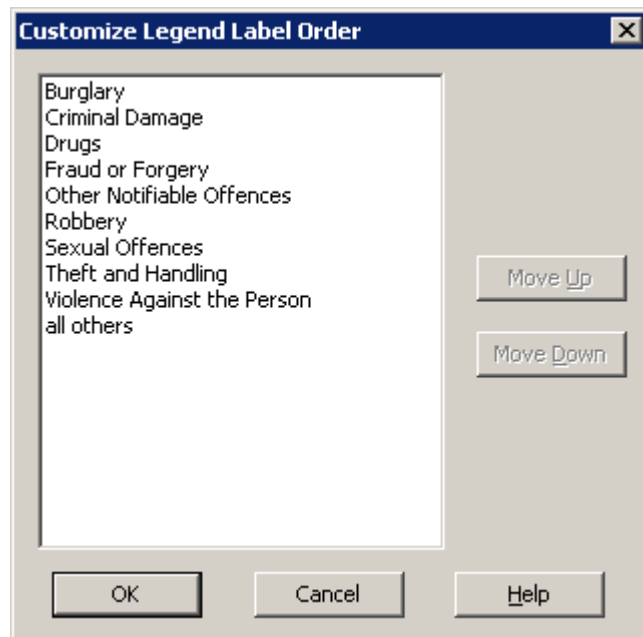
Note: This feature is only available for Individual Value thematic legends.

To customize the legend label order of an Individual Value thematic legend:

1. Create or modify an Individual Value thematic map using the Thematic dialog boxes.
2. In the **Modify Thematic Map** dialog box or the **Create Thematic Map - Step 3 of 3** dialog box, select the **Custom** option in the **Legend Label Order** area.



3. Click **Order** to display the **Customize Legend Label Order** dialog box.



4. Select an entry in the list to move and use the **Move Up** or **Move Down** buttons to place it in the desired order.
5. Click **OK** to save this order.

- Click **OK** again to display the new thematic map and the new legend.

Important Notes for Creating and Merging Theme Templates:

- MapInfo Professional saves the custom label order only when the option to Save Individual Value Categories is selected in the Save Theme to a Template dialog box. This implies that when creating a theme based on a template, MapInfo Professional applies the custom label order only when the thematic expression creates the same categories as those in the template.
- When merging theme templates, the custom label order from the source template is applied to the current theme only when the option to Merge Individual Categories is selected in the Merge a Template to a Theme dialog box and the template and current theme have the same number of categories.

Question:

Is it possible to create a layout window that when accessed, will display the current date?

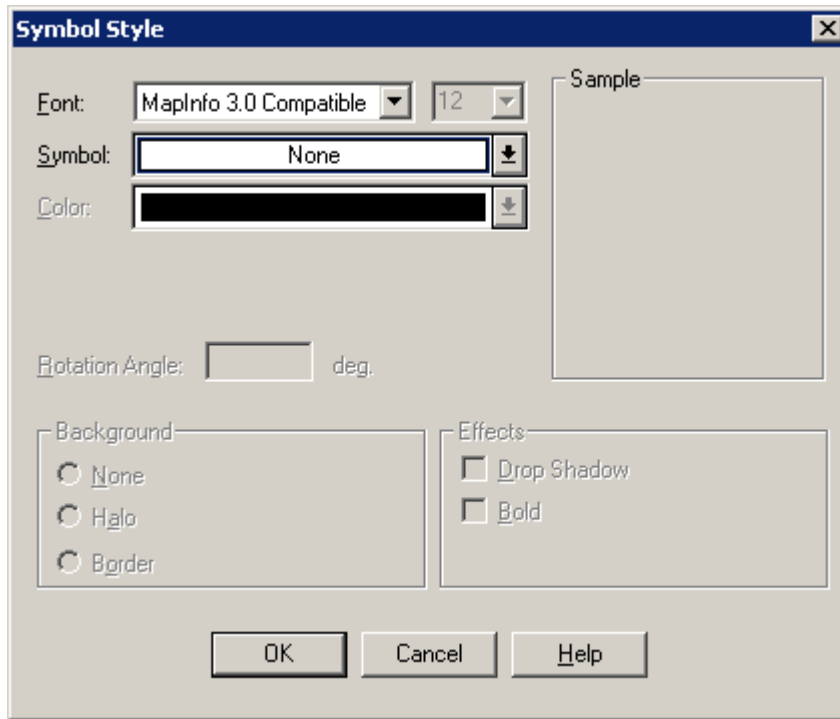
Answer:


The procedure for this will involve creating a workspace template that consists of a blank layout with a date stamp. Once the workspace is created, it can then be used to set up maps for printing in other workspaces.

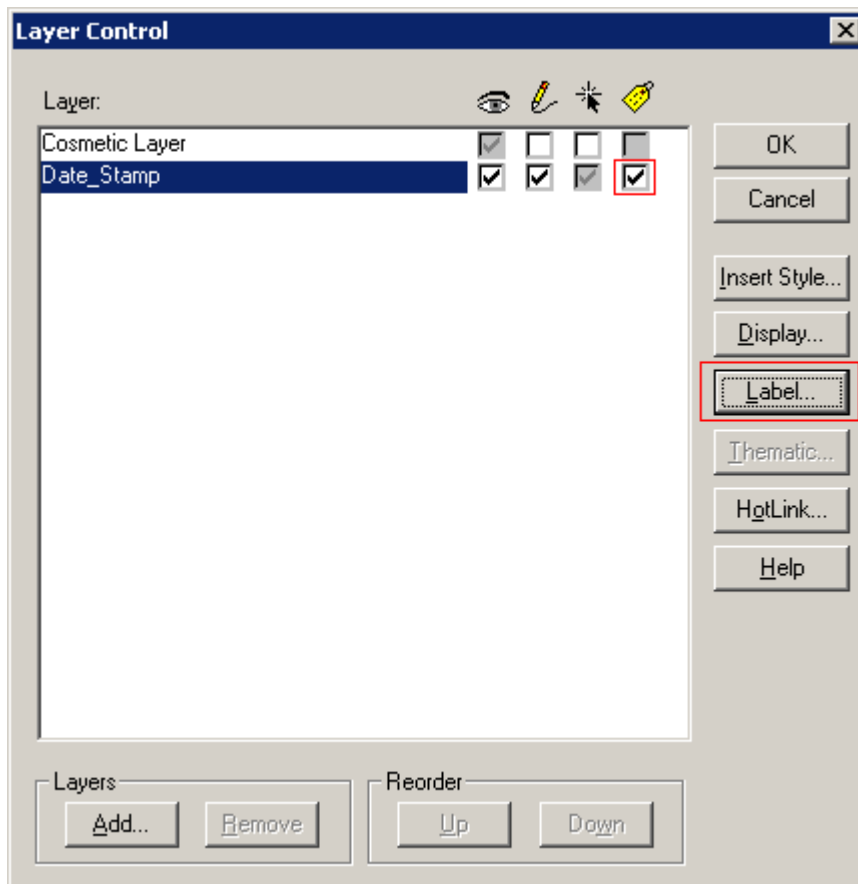
- Choose **Window > New Layout Window**.
- Choose **File > Page Setup** to set the desired page size and orientation.
- Choose **File > New Table**.
- In the **New Table** dialog box, select **Open New Mapper**. Click **Create**.
- In the **New Table** dialog box, simply add a field called **ID**. The contents of the table are not important in this case. Click the **Create**.
- When prompted to save the table, select a directory, and assign a name to the table like **Date_Stamp**.
- Once the new Map Window appears, the **Date_Stamp** layer should already be editable.

The next step involves creating a point object with no style that can be labeled with an expression that uses the MapBasic **CurDate()** function.

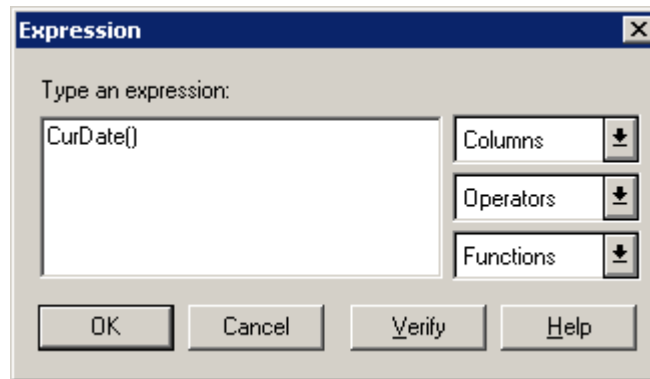
- Choose **Options > Symbol Style**. In the **Symbol Style** dialog, make the symbol type **N** for None:



9. Once the symbol style has been set to None, use the Symbol tool  and click inside the blank Map Window.
10. After clicking inside the Map Window, save the Date_Stamp table (**File > Save Table**).
11. Choose **Map > Layer Control**. Place a check in the **Autolabel** box and then click the **Label**:



12. In the **Label Options** dialog box, choose **Expression** from the **Label With** list.
13. Select or type in the `CurDate()` function.




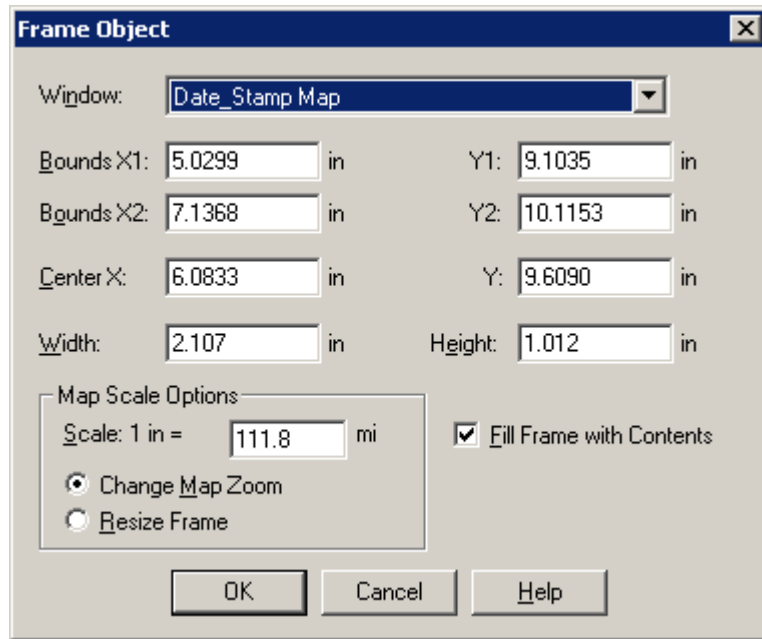
14. Click **OK**.
15. In the **Label Options** dialog box, select the desired font size and style.
16. Click **OK**.

Now the date appears in the Map Window:



The Map Window can be added to the blank layout as a frame.

17. Using the Frame tool , draw a frame on the layout in the desired location for the date to appear.
18. When the Frame Object dialog box displays, make sure the window being added is the `Date_Stamp Map`.



19. Click **OK**.

20. Lastly, choose **File > Save Workspace**. For easy distribution, save the workspace file in the same directory as the Date_Stamp table.

Now every time the workspace is opened, the layout will appear with the current date.

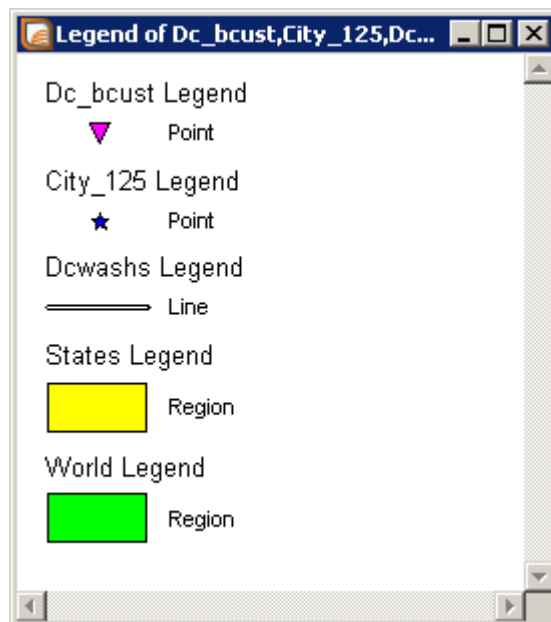
Question:

Changing the number of columns or rows in a cartographic legend frame.

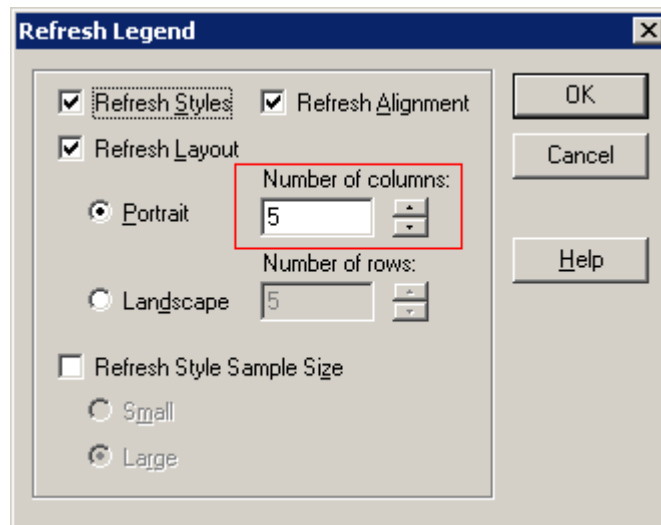
Answer:

It is possible to change the number of columns or rows in a frame legend to control the legend frame display.

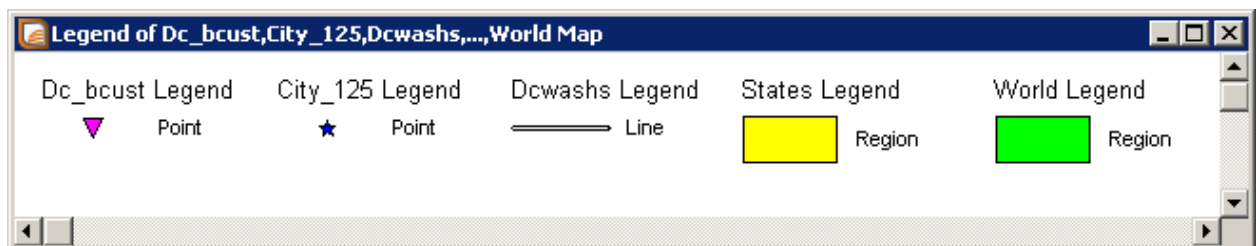
1. Create a map and legend using **Map > Create Legend** with several variables.



- Once the legend is created, right click inside the legend and choose **Refresh**.



- Enter the number of columns (from 1 to the number of items in the frame) for this frame and click **OK**.



Question:

Is there a MapBasic program that will automatically update columns with X and Y coordinates in a table's native projection?

Answer:

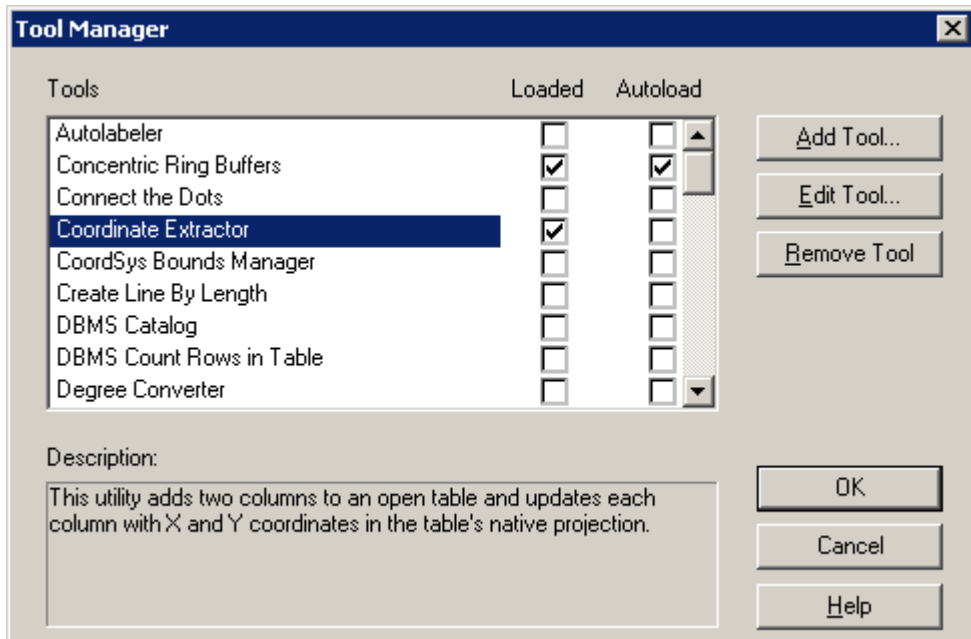
The Coordinate Extractor will add two columns to a selected table and update the columns with X and Y coordinate values in the table's native projection as opposed to the default projection of Longitude/Latitude.

For example, if a table is in UTM Zone 16, the coordinates will be in UTM values. If a table is in the default Longitude/Latitude projection, the coordinates will be in decimal degrees.

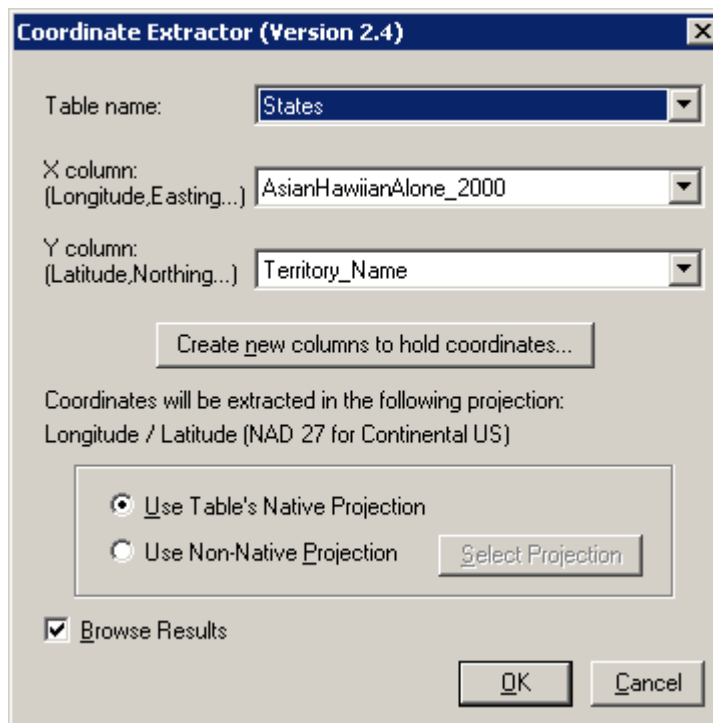
For objects other than points (such as polygons, lines), the X and Y coordinates will represent the location of the centroid of the object.

To run the program:

- From the **Tools** menu, choose **Tool Manager**.
- Load the **Coordinate Extractor** tool.



- From the **Tools** menu, point to **Coordinate Extractor** and choose **Extract Coordinates**.



- You can choose the table from which to extract the coordinates.
- You will also need to specify the columns to hold the extracted coordinates, but if you don't have any empty columns, you can add them using the **Create new columns** button.
- Click **OK** when complete.

Question:

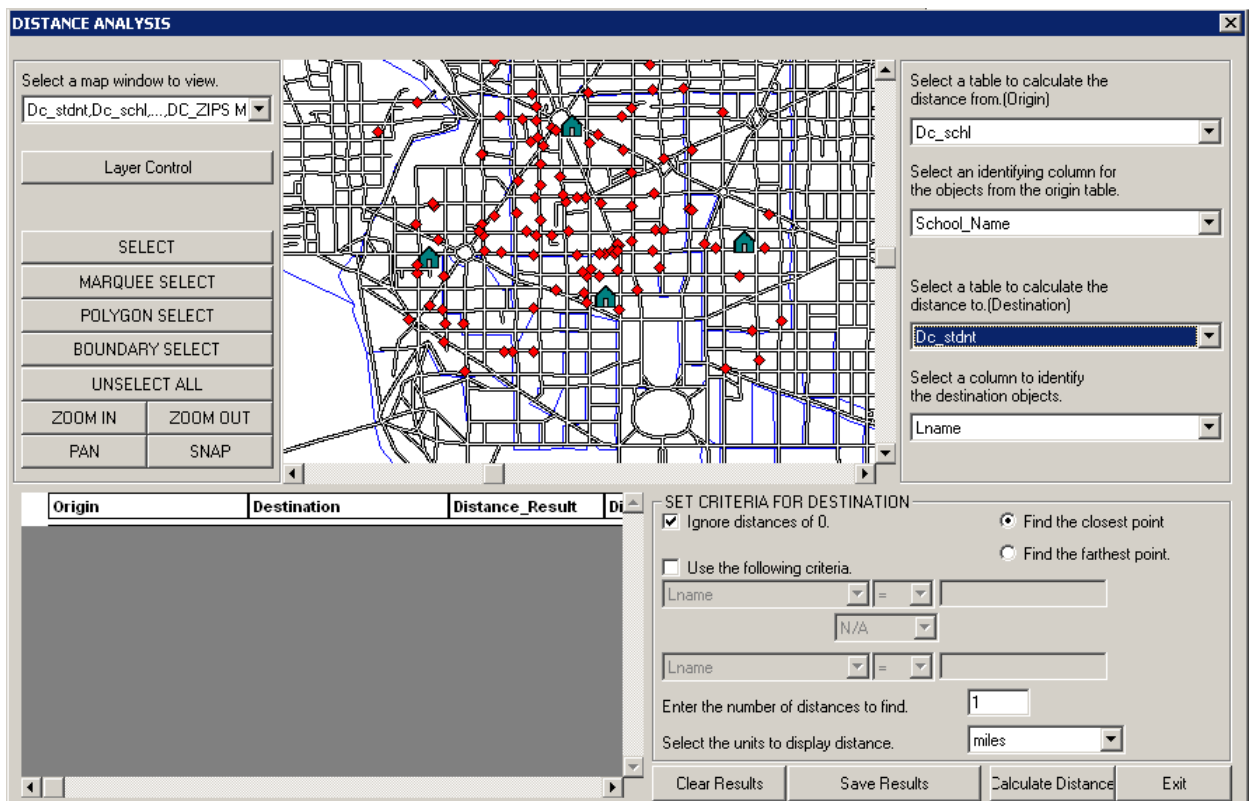
How to find the closest or furthest point(s) from another set of points.

Answer:

The Distance Calculator tool calculates the distance between all the objects in a table or two tables. It then returns the closest or furthest object(s) and populates a browser window with results. For example, you could calculate the distance between students and the schools that they attend.

This can be done in MapInfo Professional by using the Distance Calculator tool.

1. From the **Tools** menu, choose **Tool Manager**.
2. Load the **Distance Calculator** tool.
3. From **Tools** menu, point to **Distance Calculator** and choose **Run Distance Calculator**.
4. You can choose the origin and destination tables, and specify any search criteria.



5. When you click **Calculate Distance**, the results will be displayed in a mini-browser in the bottom left-hand corner. You can save the results from here if needed.

Question:

How would the spider graph tool be used?

Answer:

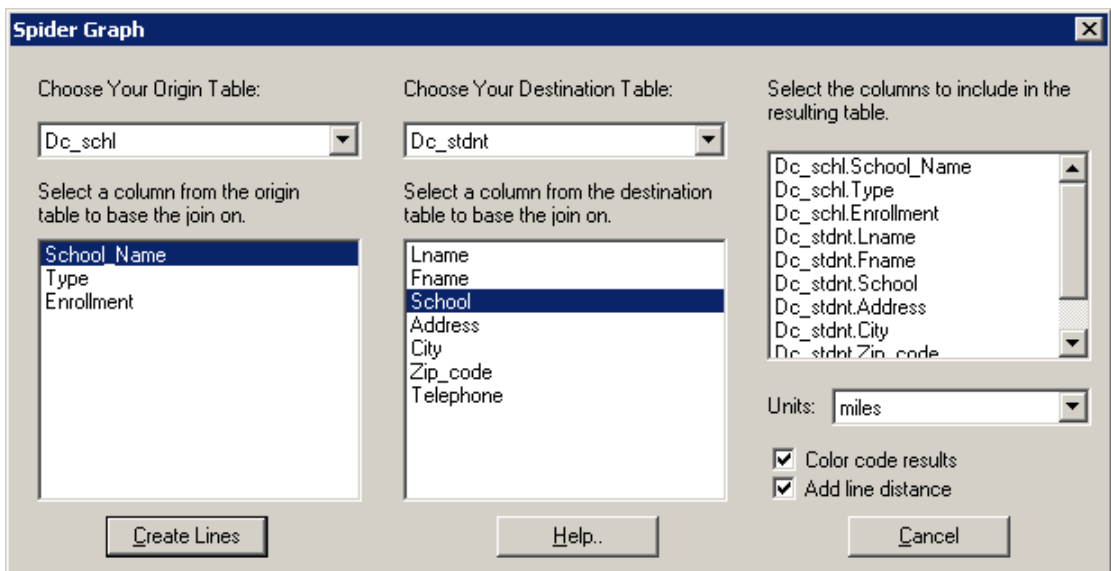
The Spider Graph tool draws lines between objects in a single table, or the objects from two tables based on a join. It then creates a new table of lines that connect the objects from the origin table to the destination table based on matching column values. By default, the lines are color-coded based on their table of origin. Also by default, the new table includes a distance column that stores the length of each line.

To use the Spider Graph tool:

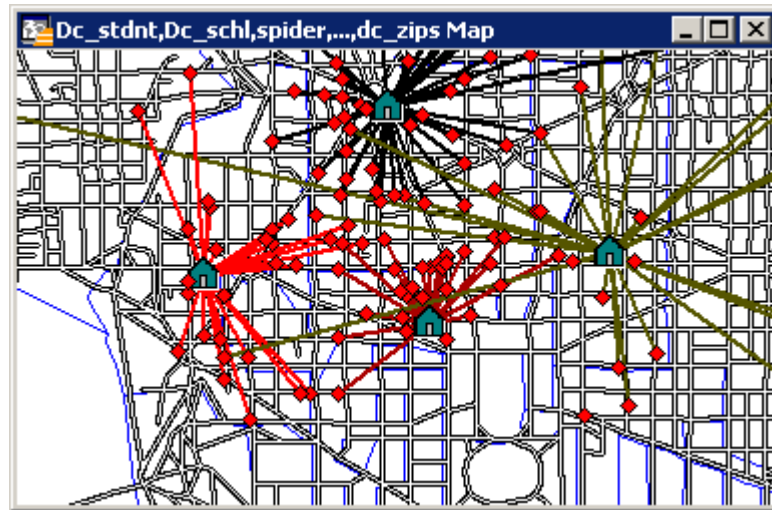
1. Use the **Tool Manager** to load the Spider Graph tool.
2. With the appropriate tables open, from the **Tools** menu, point to **Spider Graph** and choose **Spider Graph**.

Note: The Spider Graph tool works with mappable vector tables only. It can not be used with raster images.

3. In the Spider Graph dialog box, select the origin table, then select the column that will be used to join the origin table to the destination table
4. Select the destination table, then select the column name that will be used to join the destination table to the origin table.
5. Select the columns to include in the resulting table. To select multiple columns, hold down the **CTRL** key while you click. If no columns are chosen, Spider Graph will automatically include the join column specified for the origin table.
6. By default, the Spider Graph tool will color-code the resulting lines and add a distance column to the new table to record the length of each line. If it is not desired to have these features, clear the appropriate checkbox.
7. The distance lines will use units of miles by default. To change this, select another distance unit from the UNITS: drop-down list.



8. Click **Create Lines**.
9. Enter a new name and location for the resulting table in the **Save Copy As** dialog box and click **Save**.



Question:

How can I delete duplicate records in a table?

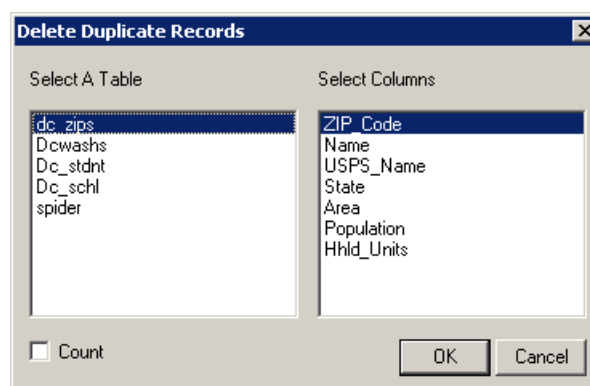
Answer:

There is a tool in MapInfo Professional called Delete Duplicates that allows you to delete duplicate records from a table while retaining map objects. This tool does not change the original table in any way. Keep in mind that MapInfo Professional has a 255 byte/ 5-column limit for a Group By clause, so it may be necessary to change the size of the columns if they are unusually wide.

When referring to duplicate rows, this means rows that have duplicate occurrences of the same column value for the column that was selected.

To remove duplicate records from a table and save the cleaned table to a new file:

1. Use **Tool Manager** to load the Delete Duplicates tool.
2. Open the necessary table or tables.
3. From the **Tools** menu, point to **Delete Duplicates** and choose **Delete Duplicates** to display the Delete Duplicate Records dialog box.

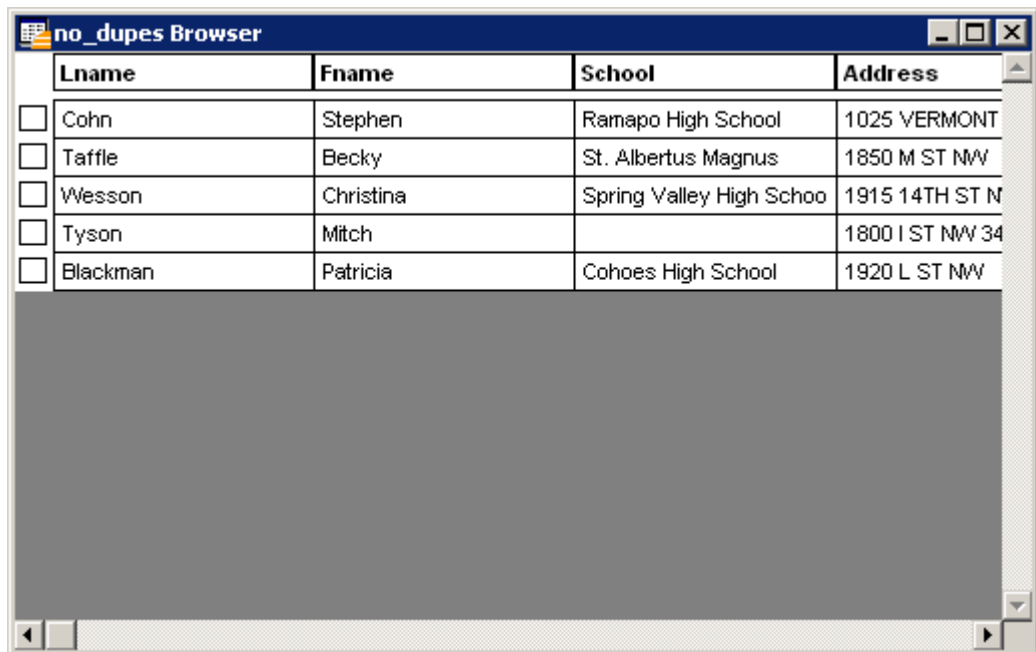


4. Select the table from which to delete duplicates in the first list. A list of the columns in that table displays on the right.
5. Select the column that contains information that should be unique to each row from the Select Columns list. It is possible to select multiple columns to group by, but keep in mind MapInfo has a 254-byte (or in this case character) limit on any group by statement. Delete Duplicates will display an alert if this limitation has been exceeded.

Caution: The Delete Duplicates tool does not modify the original table. However, to avoid deleting data incorrectly, give this step a lot of thought. For example, it is not recommended to select customer names or addresses for this step.

6. Select the **Count** checkbox to add a column to the new table that shows the number of instances of the column value found in the original table.
7. Click **OK**. The **Please Choose a Path** dialog box displays.
8. Select a path and a filename for the new table in this dialog box. Click save.

The tool removes rows containing duplicate column values according to the column that was selected. A browser window displays with the results of the new table.



| | Lname | Fname | School | Address |
|--------------------------|----------|-----------|--------------------------|-----------------|
| <input type="checkbox"/> | Cohn | Stephen | Ramapo High School | 1025 VERMONT |
| <input type="checkbox"/> | Taffle | Becky | St. Albertus Magnus | 1850 M ST NW |
| <input type="checkbox"/> | Wesson | Christina | Spring Valley High Schoo | 1915 14TH ST N |
| <input type="checkbox"/> | Tyson | Mitch | | 1800 I ST NW 34 |
| <input type="checkbox"/> | Blackman | Patricia | Cohoes High School | 1920 L ST NW |

Note: If you checked the **Count** box, the last column of the table contains the count of instances of the row containing duplicate column values in the original table.

Question:

How can I synchronize my Map Windows?

Answer:

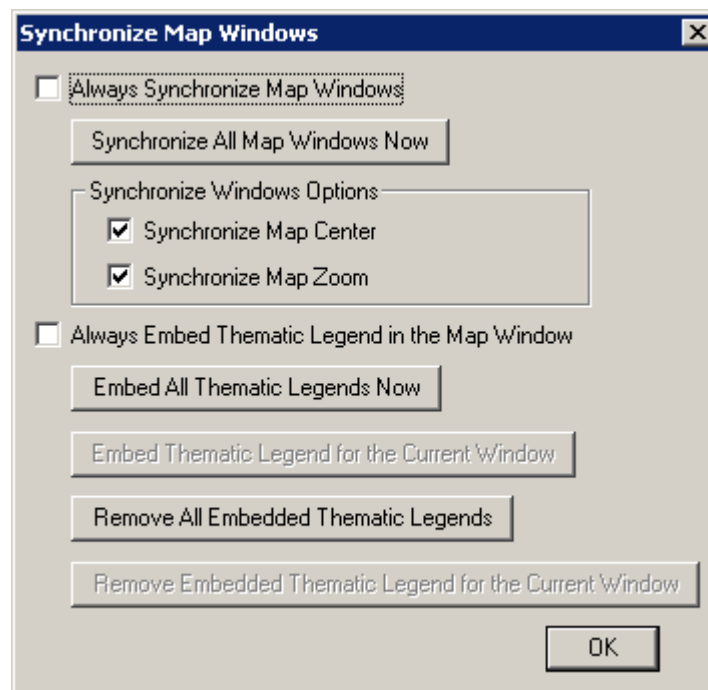
The Synchronize Windows tool provides toolbar icons that allow the ability to automatically share changes made in one mapper window to all other mapper windows in a given MapInfo Professional session. For example, use this tool to look simultaneously at several sets of complex feature data covering the same location. In cases where a single map containing all the data would be more confusing than helpful, several synchronized maps can often display the information more clearly. The ability to embed thematic legends is useful to provide greater understanding of the data being presented. The icons on the Sync Windows toolbar are shortcuts to commonly used functionality.

1. Use **Tool Manager** to load the Sync Windows tool.



From left to right, these buttons are:

- a. CLONE MAP WINDOW - Provides the same functionality as MAP>CLONE VIEW.
- b. RENAME CURRENT MAP WINDOW - Allows the currently active Map window to be renamed.
- c. TILE WINDOWS - Provides the same functionality as WINDOW>TILE WINDOWS.
- d. SYNC ALL MAP WINDOWS - Provides a way to synchronize multiple map windows and embed thematic legends.



Note: Note: It is possible to synchronize the maps by center or zoom level.

- e. CREATE A SYMBOL ON ALL COSMETIC LAYERS - Provides a way to draw a symbol in the same location across multiple map windows.
- f. CREATE A POLYLINE ON ALL COSMETIC LAYERS - Provides a way to draw a polyline in the same location across multiple map windows
- g. CREATE A RECTANGLE ON ALL COSMETIC LAYERS - Provides a way to draw a rectangle in the same location across multiple map windows.
- h. CREATE A ELLIPSE ON ALL COSMETIC LAYERS - Provides a way to draw an ellipse in the same location across multiple map windows.
- i. CLEAR COSMETIC LAYERS - Clears the Cosmetic layers of all of all synchronized mapper windows.

Caution: This removes all features added to the Cosmetic layers, not just the 'synchronized' features added by this tool during this session.

Question:

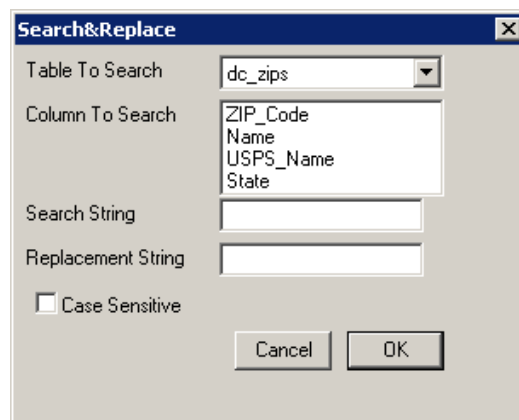
Can I search and replace to update Multiple Columns?

Answer:

The Search and Replace Tool in MapInfo Professional can replace multiple column entries in a selected table. This tool is particularly useful when names change or specific character data changes. To search a table, the file must be open.

To use the search and replace tool:

1. Use **Tool Manager** to load the Search and Replace tool.
2. Open the necessary table for which it is desired to search and replace data. MapInfo Professional must be able to read the tables to search.
3. From the **Tools** menu, point to **Search and Replace** and choose **Search and Replace**.



Note: The **Column to Search** list allows for picking multiple columns.

4. Select the table and columns to search from the lists.
5. In the **Search String** box, type the text to find.
6. In the **Replacement String** box, type the text you wish to replace it with.
7. If the string entered should be case sensitive, select the **Case Sensitive** check box.
8. Click OK to begin the search and replace process.

Question:

How is it possible to move a workspace to another location?

Answer:

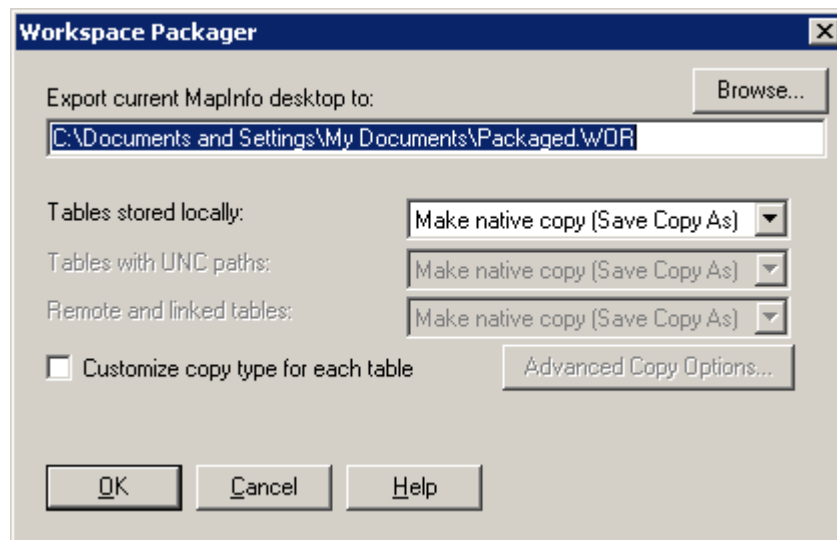
Use the Workspace Packager tool.

Use this tool to create a copy of a workspace in a new location or folder. It will copy all the data referenced by the workspace to the same location. MapInfo Professional updates the internal references in the workspace file to point only to the "packaged" copies of the data so the new workspace can be opened no matter where the folder is moved or copied, even if the folder is moved or copied to a different computer.

1. Use **Tool Manager** to load the Workspace Packager.
2. From the **Tools** menu, choose **Workspace Packager**. There are two options:
 - a. **Package Current Workspace** will allow the workspace that is currently open to be packaged.
 - b. **Select Workspace to Package** will allow the workspace(s) to be chosen to package.

To package your current workspace:

1. It is a good idea to make a new folder in which to place the packaged workspace and corresponding files. Choose the new folder that was made by clicking **Browse**.
2. Use either the original files (good when sharing a workspace that is already on a shared resource) or make a copy (good to send to someone else).
3. It is possible to customize the copy type if desired (for advanced users).



If you had chosen Select Workspace to Package, you would be prompted with a dialog box, allowing you to select multiple workspaces.

Question:

When opening a workspace, an error is received "Variable or field not defined". How can this be fixed?

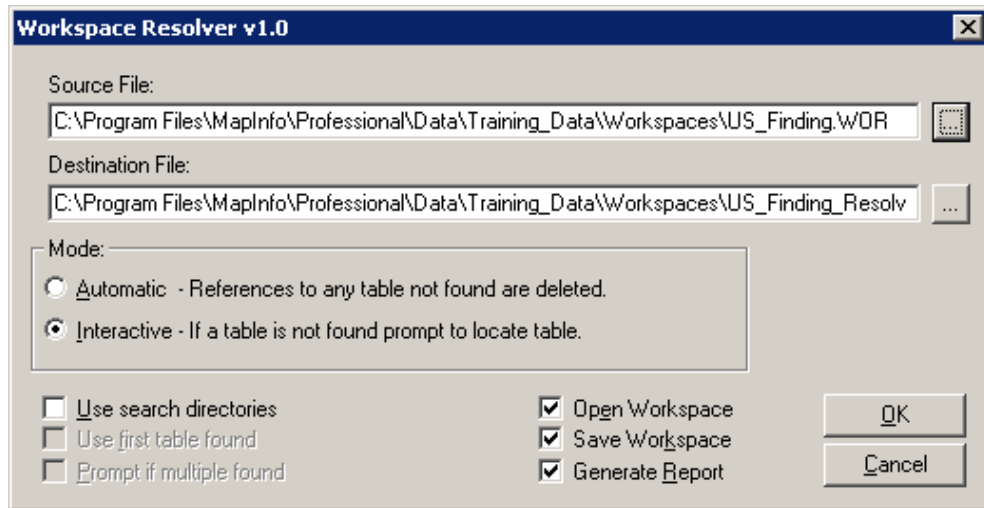
Answer:

This error message is generated when trying to open a workspace in MapInfo Professional. This usually happens when a variable or field in a table that is being referenced in this workspace has been altered outside of the workspace. For example, a column name in a table called "streets" was renamed to "address".

There is a tool called Workspace Resolver that allows opening a workspace that references tables that no longer exist in the location specified by the workspace file. This tool can perform a search and replace the missing table or alternatively resolve the workspace file by ignoring the missing table.

Using the Workspace Resolver to remove references to a missing table in a workspace:

1. Use the **Tool Manager** to load the Workspace Resolver.
2. Close all of the open .tab files before using the Workspace Resolver. If the tables aren't closed, a prompt displays asking if the application should close them. Click **Close All** to continue.
3. From the **Tools** menu, point to **Workspace Resolver** and **Resolve Workspace Tables**. The **Workspace Resolver** dialog box displays.
4. Specify the workspace to be resolved in the **Source File** box.
5. MapInfo Professional pre-fills the Destination File field with the same name and path plus the word **_Resolved** as a convenience, but this file can be renamed as necessary.
6. In the **Mode** area, choose **Automatic** or **Interactive**.
 - Automatic will delete any references to missing tables.
 - Interactive will prompt you to find the missing tables.
7. To save the workspace after the references are removed, select **Save Workspace**. This must be selected or the workspace is not saved.
8. To open the new workspace file after the references are removed, select **Open Workspace**.
9. To display the results of the process, select **Generate Report**.



10. Click **OK** to begin the process.

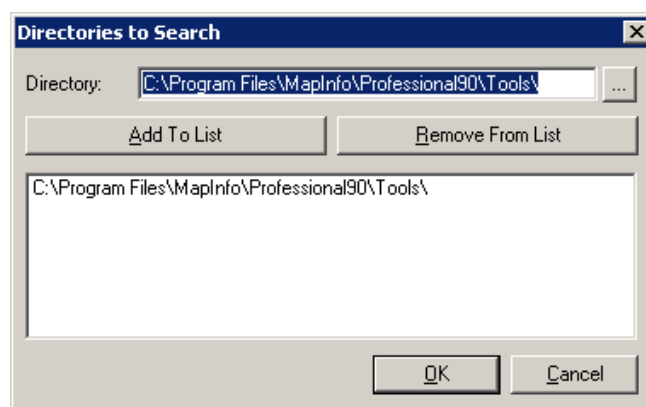
Note: The resolved workspace has not been saved if the **Save Workspace** checkbox has not been checked.

Specifying Directories to Search

A list of directories can be created for the Workspace Resolver to search to find the missing workspace .tab files.

To create a list of directories for the Workspace Resolver tool to search for missing workspace .tab files:

1. From the **Tools** menu, point to **Workspace Resolver** and choose **Settings**. The **Directories to Search** dialog box displays.



2. Use the **Directory** box to find the first directory the Workspace Resolver should search.
3. Click **Add to List**. Repeat this process for as many directories as desired to add to the list. The Workspace Resolver searches the subdirectories of any folder selected.

Note: If a directory is entered by mistake or it should be removed, highlight it in the list and click **Remove from List** to delete it.

4. When this list has been completed, click **OK** to save the list. The Workspace Resolver uses this list when searching for missing .tab files.

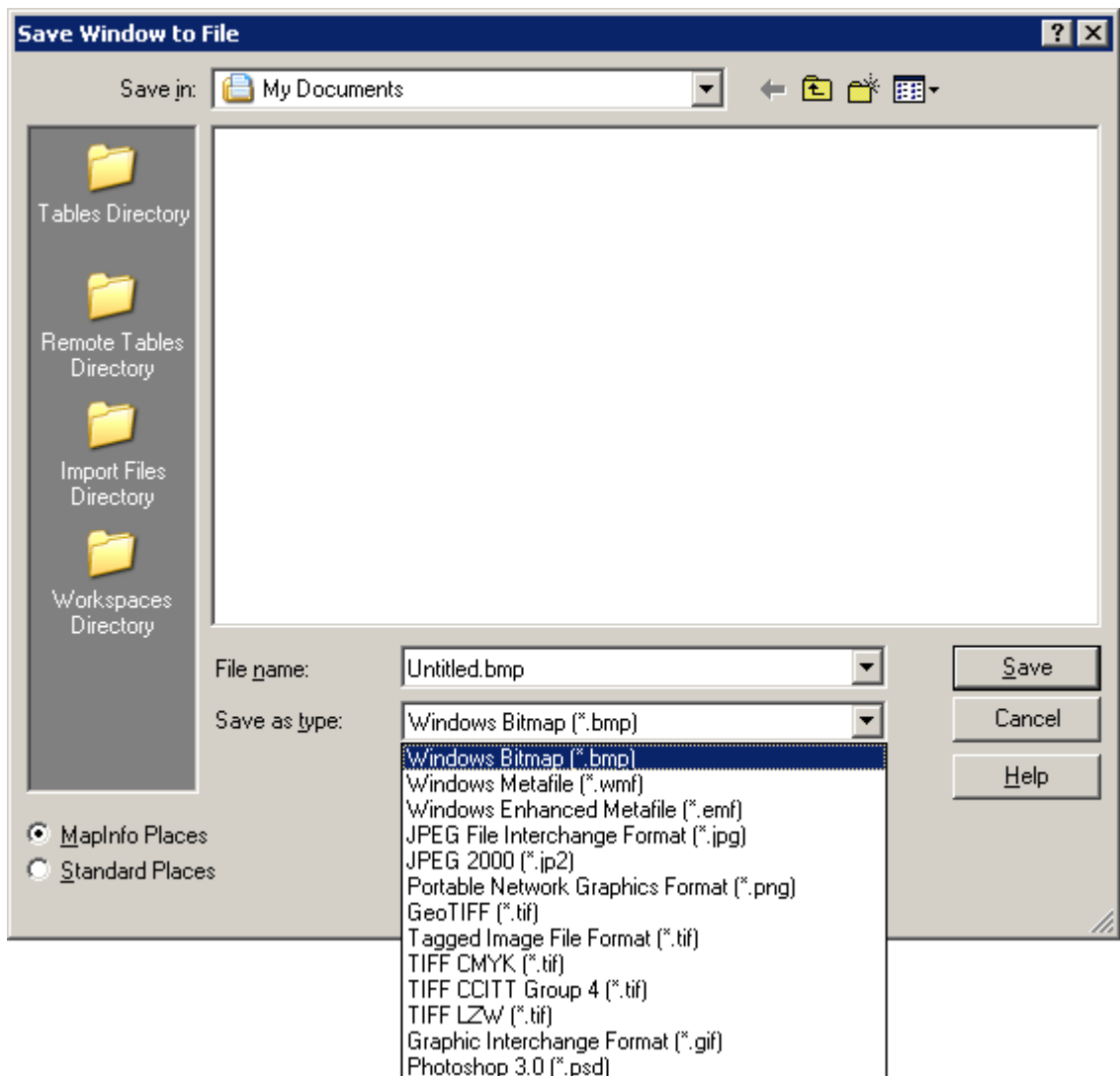
Question:

How can I save my map, layout, browser, 3D window, redistrict window or graph as an image?

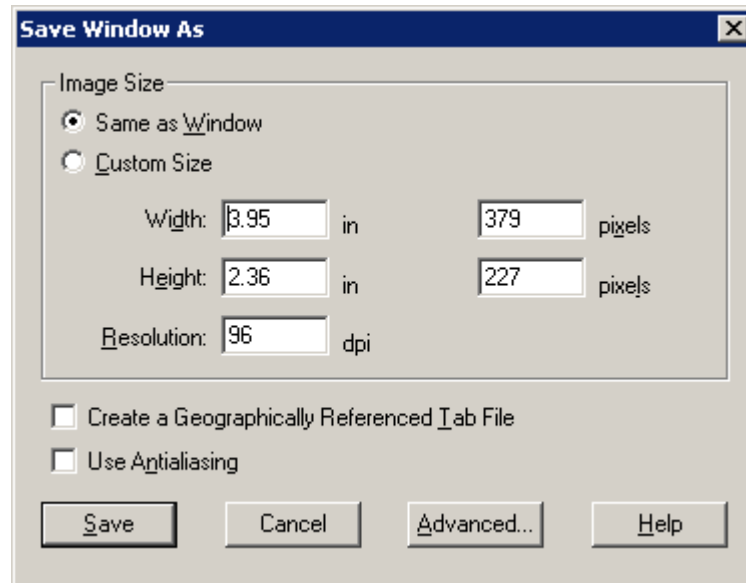
Answer:

By using the Save Window as functionality.

1. Open a window to save in the new format.
2. From the **File** menu, choose **Save Window As** to display the **Save Window To File** dialog box.



3. From the **Save As Type** list, choose the desired file format.
4. Specify a file name and click **Save**. The second dialog box opens.



5. Specify the size of the image, if necessary.
6. Adjust the resolution by changing the dpi (dots per inch) if necessary.
7. Use antialiasing (smoothing) if necessary.
8. Click **Save**.

Question:

How do I save a map window as a geographically referenced Tab File?

Answer:

You can now save the current Map window and automatically register it by creating a .TAB file.

To save the current map as a .TAB file:

1. From the **File** menu, choose **Save Window As**.
2. Select the type the file name and click **Save**. The second dialog box displays.
3. Select **Create a Geographically Referenced Tab File**.
4. Click **Save**.

MapInfo Professional automatically creates registration points based on the current map view and saves it as a .TAB file. When you choose **File > Recent Files**, the file you created is the first file in the list.

Note: If MapInfo Professional cannot create registration points for the window image, an error message displays. This might happen if you pan outside the bounds of the map.

Question:

Is there a list of the Function Keys and Shortcuts?

Answer:**Function Keys:**

F1 – Help F4 - New Graph Window F8 - Text Style
 F2 - Browse Table F5 - New Layout Window F9 - Create Thematic Map
 F3 - New Map Window F7 - Get Info F10 - Create Prism Map

Menu Shortcuts:

| | | | |
|-----------------------|----------|----------------------|---------------|
| File menu: | | Options menu: | |
| New Table | Ctrl+N | Line Style | Shift+F8 |
| Open Table | Ctrl+O | Region Style | Ctrl+F8 |
| Save Table | Ctrl+S | Object Style | Alt+F8 |
| Save Workspace | Ctrl+K | Text Style | F8 |
| Print | Ctrl+P | | |
| Exit | Alt+F4 | | |
| | | | |
| Edit menu: | | Map menu: | |
| Cut | Ctrl+X | Layer Control | Ctrl+L |
| Copy | Ctrl+C | Create 3D Map | F11 |
| Paste | Ctrl+V | Create Prism Map | F10 |
| Clear | Del | Create Thematic Map | F9 |
| Reshape | Ctrl+R | Modify Thematic Map | Alt+F9 |
| New Row | Ctrl+E | Previous View | Alt+LeftArrow |
| Get Info | F7 | | |
| | | | |
| Tools menu: | | Window menu: | |
| Run MapBasic Program | Ctrl+U | New Browser Window | F2 |
| | | New Map Window | F3 |
| Objects menu: | | New Graph Window | F4 |
| Set Target | Ctrl+T | New Layout Window | F5 |
| Clear Target | Ctrl+Del | Redraw Window | Ctrl+D |
| | | Tile Windows | Shift+F4 |
| Query menu: | | Cascade Windows | Shift+F5 |
| Find | Ctrl+F | | |
| Unselect All | Ctrl+W | | |
| Find Selection | | | |
| In Current Map Window | Ctrl+G | | |
| In All Windows | Ctrl+A | | |
| | | | |
| Table Menu: | | | |
| WFS Table refresh | Alt+F5 | | |

MapInfo HotKeys:

- Snap - S
- AutoNode - N
- Crosshair - C
- Autotrace - T

Useful URLs

[MapInfo Home Page](http://www.mapinfo.com/)

<http://www.mapinfo.com/>

[MapInfo Knowledge Base](http://testdrive.mapinfo.com/kbase_by_product)

http://testdrive.mapinfo.com/kbase_by_product

[MapInfo BugBase](http://testdrive.mapinfo.com/kbase_by_product)

http://testdrive.mapinfo.com/kbase_by_product

[MapInfo Product Documentation](http://extranet.mapinfo.com/support/documentation/manuals.cfm)

<http://extranet.mapinfo.com/support/documentation/manuals.cfm>

[MapInfo Training](http://www.mapinfo.com/training)

<http://www.mapinfo.com/training>

[DirectionsMag](http://www.directionsmag.com/files/) -(not maintained by MapInfo)

<http://www.directionsmag.com/files/>

[MapInfo FAQ](http://www.integrated-mapping.com/scripts/mi_faq/faq.dll/Index) -(not maintained by MapInfo)

http://www.integrated-mapping.com/scripts/mi_faq/faq.dll/Index

[MapInfo-L](http://nt1.directionsmag.com/mapinfo-l/) - (not maintained by MapInfo)

<http://nt1.directionsmag.com/mapinfo-l/>

