



ArcLink

3.0

USER GUIDE

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Introduction to ArcLink

ArcLink is a bidirectional utility program that allows you to convert ARC/INFO Export format files into MapInfo Professional (TAB) or MapInfo Professional's intermediate file format MIF/MID. You can also convert TAB files into ARC/INFO Export files with this product.

ARC/INFO points, arcs, nodes, annotation, tics and polygons convert to MapInfo Professional points, lines, polylines, text and regions. Attribute values and relational data convert as well. At the completion of the conversion, you are ready to display the converted TAB tables in MapInfo Professional (or import the MIF/MID files into MapInfo Professional).

You can choose to have multiple TAB files combined into a single ARC/INFO export file. After conversion, they are ready to import directly into ARC/INFO.

Topics in this Section:

- ◆ **Getting Started**4
- ◆ **System Requirements**4

Getting Started

This product guide contains the instructions and specifications you need to run the utility successfully and is organized as follows:

- For converting ARC/INFO Export files to MapInfo Professional TAB or MIF/MID files, see [Converting ArcInfo Exports to MapInfo Professional Format in Chapter 2 on page 6](#).
- For converting MapInfo Professional TAB files to ARC/INFO Export files, see [Converting MapInfo Professional Tables to ArcInfo in Chapter 3 on page 19](#).

At the end of next chapters are special considerations and limitations to be aware of when performing a translation of ARC/INFO or MapInfo Professional files.

System Requirements

Be sure that your TMP or TEMP environment variable is set to an area that can store temporary files. For example, your autoexec.bat file should contain a line similar to the following:

```
SET TMP=C:\TEMP
```

or

```
SET TEMP=C:\TEMP
```

File Format

ARC/INFO to MapInfo Professional: The ARC/INFO files to be converted must be in ARC/INFO Export (.E00) format. The files can be either compressed or uncompressed (compressed files take longer to translate). We assume that the file has undergone a BUILD or CLEAN operation following the last edit session in ARC/INFO. This utility will handle conversions that span multiple export files (.E00, .E01, .E02, etc.). This utility does not convert native export files directly. ArcLink does not convert plot files, NETWORK export files, TINs, GRIDs, Arc/Info regions, dynamic segmentations or routing information. We assume for each feature you want translated, there exists an ARC/INFO attribute table.

MapInfo Professional to ARC/INFO: ArcLink will convert any MapInfo Professional TAB file. No special requirements are necessary. ArcLink does not, however, convert certain objects, including rectangles, rounded rectangles, arcs or ellipses.

File Size

In general, the files created with ArcLink are similar in size to the original Export or TAB file from which they were created. Multiple TAB files can be converted into a single Export file that would be similar in size to the combined TAB files.

-
-  During processing, ArcLink creates temporary files in the output directory. These files are removed upon completion of the translation. Total free disk space needed by ArcLink for translation, including final output and temporary files, is approximately twice the size of the input file.
-

Converting ArcInfo Exports to MapInfo Professional Format

This chapter discusses the steps for converting ARC/INFO Export files to MapInfo Professional (TAB or MIF/MID) format files. The chapter concludes with some considerations to keep in mind when converting files from ARC/INFO to MapInfo Professional format.

Topics in this Section:

- ♦ **Running ArcLink**7
- ♦ **Creating an Input File**.....11
- ♦ **Conversion Considerations**14

Running ArcLink

ArcLink runs from within MapInfo Professional as an add-on application. Dialog boxes allow you to specify which ARC/INFO files you wish to convert. You can control the conversion process by specifying the coordinate system of the files to be converted and whether the files will be written in MapInfo Professional binary (TAB) format or in ASCII (MIF/MID) format.

Each ARC/INFO Export file contains an export file that may include multiple layers (for example, lines and polygons). ArcLink converts each layer into a separate MapInfo Professional table. You can tell ArcLink to convert any or all of the features in a given export file.

To run the ArcLink tool in MapInfo Professional:

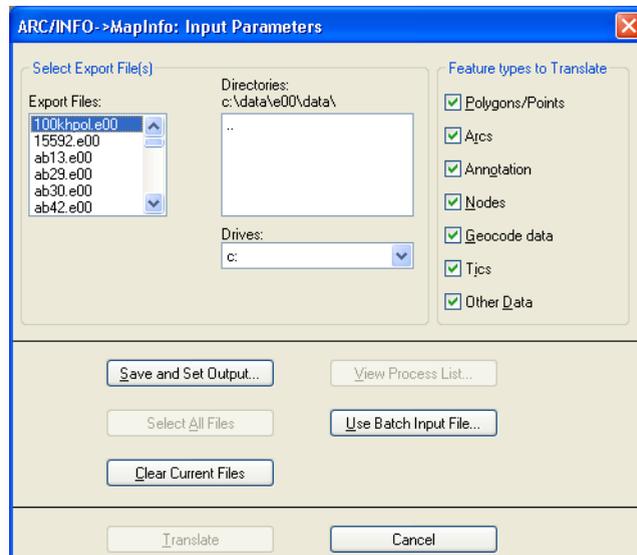
1. Open MapInfo Professional and choose **Tools > ArcLink**.
2. Choose **ARC/INFO > MapInfo** and select the files you want to translate.
3. Change any output parameters from the default, such as output file type or projection (Optional).
4. Run the translator.

The process is described below.

Step 1 Choosing Files to be Converted

To specify which files you want to translate:

1. Choose **Tools > ArcLink > ARC/INFO to MapInfo** from the Main menu. The Input Parameters dialog box displays.



2. Choose the drive and directory of the files you wish to convert. Click on the double periods in the Directories list box to move up the directory structure. The ARC/INFO Export files with extension .E00 display.

3. Click on the Export file(s) you want to convert. **Shift**-click or **Control**-click to choose more than one file. Alternatively, you can use an input file for batch processing. See [Creating an Input File](#). Double-clicking on the file brings you directly to the Save and Set Output Parameters dialog box.
4. Deselect any Feature Type you do not wish converted. The default is to translate all feature types.
5. Save the selection(s) by choosing the **Save and Set Output** button. The Save and Set Output Parameters dialog box displays. Change any default parameters (optional). For more on this dialog, see [Step 2 Changing Output Parameters \(Optional\)](#).

 Important: You must save each file or set of files you want to convert by choosing the **Save and Set Output** button. ArcLink stores the information in a temporary file and uses it during the translation. By saving each selection, you can choose as many or as few files as you want to translate in one session, including files with different coordinate systems and other output parameters.

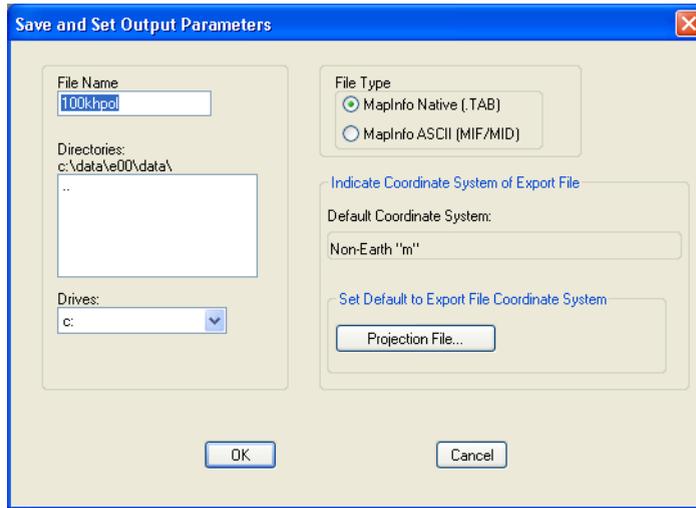
6. Click **OK** when you are finished. You are returned to the Input Parameters dialog box.
7. Repeat steps 2–6 to specify additional files for conversion during the same session.

 The settings in the Input and Output Parameters dialogs are retained for subsequent files you may select during the current session. If you wish to change the settings for a file, simply reset the options. The settings are reset to the defaults after the current translation session.

Step 2 Changing Output Parameters (Optional)

To change any default output parameters:

1. From the Input Parameters dialog box, highlight an Export file and choose the **Save and Set Output** button. The Save and Set Output Parameters dialog box displays.



2. Make any changes to the parameters you wish (described below).
3. Click **OK** when you are finished. You are returned to the Input Parameters dialog box where you can choose additional Export files for translation or choose **Translate**.

The output parameters are listed and explained below.

Output Parameter	Default	Options
File name and path	same as input	user's choice
File type	MapInfo Native (.tab)	MapInfo ASCII (MIF/MID)
Coordinate System	non-earth in meters	user's choice

Output Parameter Default Option

File Name and Path

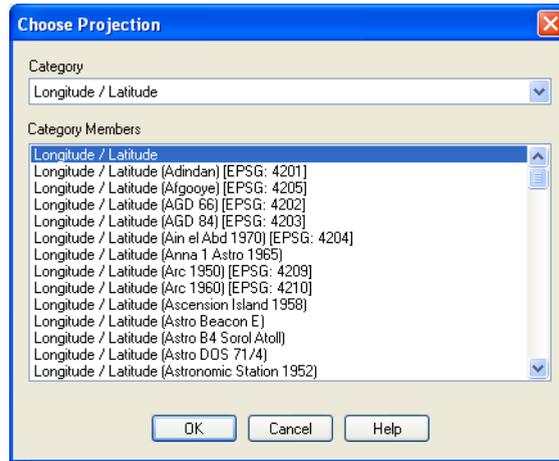
To specify a new file name and/or path for the output file, change the information in the Output Parameters dialog box.

File Type

Choose the MapInfo ASCII (MIF/MID) button under File Type if you do not want to convert your Export to MapInfo Native TAB format.

Coordinate System

ARC/INFO Export files do not necessarily contain coordinate system information. Therefore, you must tell ArcLink what coordinate system to use. If you do not want to accept the default non-earth in meters coordinate system, you must specify another system. Click on the **Projection File** button. The Choose Projection dialog displays. Choose the Projection category and member (if necessary) from the drop-down lists.



To change only the units on the default Non–Earth coordinate system, choose **Non–Earth** from the Category list and select the appropriate units from the member list.

i ArcLink does not perform any coordinate system conversion. You must supply the coordinate system the data is in, if other than the default (Non–Earth in meters).

When you choose a coordinate system, ArcLink writes it to the temporary file along with the other input and output parameters you specified. The coordinate system is listed as a string of numbers representing the parameters that define it. For an explanation of these parameters, refer to your *MapInfo Professional User Guide*. The coordinate system choices are derived from the MapInfo Projection file. You can add custom projections to the projection file.

STEP 3 Running the Translator

When you have selected all the files you wish to translate, click the **Translate** button from the Input Parameters dialog box. A message window followed by a progress bar display, indicating the translation is proceeding.

i Translate is only available after you have made your file selections in the Input Parameters dialog box.

During translation, ArcLink creates a message file, called ARCLINK.MSG, that contains important information about how your files were converted, including the status of the conversion, number of objects created for each export file, error messages about unsuccessful conversions and other information about the process. The file is written to the Temp directory defined by the TEMP environment variable.

STEP 4 Exiting ArcLink

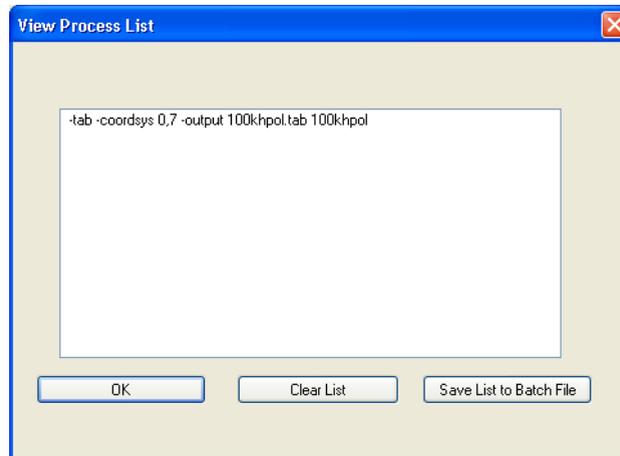
When you have completed the file conversion process, choose **Tools > ArcLink > Exit ArcLink**. This closes ArcLink and removes the program from the MapInfo Professional menu bar.

Creating an Input File

As an alternative to individually choosing Export files in the Input Parameters dialog, you may wish to use a file that already contains a list of Export files and parameters. The process is the same as selecting and saving files to the temporary file, with the additional step of making the temporary file a permanent text file.

To create an input file:

1. From the Input Parameters dialog choose a file you wish to include in the input file (described in **Step 1 Choosing Files to be Converted**).
2. Choose the **Save and Set Output** button to save the file to the temporary file.
3. Change or accept the output parameters. Click **OK**. You are returned to the Input Parameters dialog.
4. Repeat steps 1–3 to choose additional files to be added to the input file.
5. Once you have chosen and saved all the files you wish to include in the input file, choose the **View Process List** button. The View Process List dialog box displays. Each Export file you wish to translate is listed individually along with the input and output parameters you set.



6. Choose the **Save List to Batch File** button to save this information as an input file for future processing. The Save List to Batch File dialog box displays.



7. Specify the appropriate path and file name for the input file.
8. Click **OK**. You are returned to the View Process List dialog box.
9. Click **OK** again to return to the Input Parameters dialog box.
10. Click the **Use Batch Input File** button, specify the Input file and choose the **Translate** button to begin processing the file. To leave the Input Parameters dialog box without processing choose **Cancel**.

Conversion Options for Batch Files

You can create a batch file by hand instead of creating one via the ArcLink interface. Include any or all of the following switches in the .txt file to define how you want ArcLink to process and translate your files. Enter the information for each file to be translated on one line.

Separate each option with a space. See the examples in the illustration below.

Option	Use/Description
-tab	Use when converting into TAB format files. This is the default. If omitted, the files still convert to TAB format.
-mif	Use when converting into MIF/MID files. You must use this option if you want this conversion, otherwise the conversion will default to the TAB format.

Option	Use/Description
-coordsys <type, datum, unit, etc>	<p>Allows you to maintain the coordinate system in the output file. Use the appropriate coordsys line from the MAPINFO.PRJ file separated by commas with no spaces between parameters.</p> <p>Example:</p> <pre>-coordsys 14,62,7,0</pre> <p>where 14,62,7,0 represents the Eckert IV (Equal Area) coordinate system.</p> <p>If you do not specify a coordsys option, ArcLink will assume the file is a non-earth map in meters.</p>
-nonearth <units>	<p>Allows you to maintain the coordinate system units for a non-earth map in the output file. Use the units abbreviation from the following list:</p> <ul style="list-style-type: none"> • ft feet • km kilometers • m meters • mi miles • survey ft U.S. survey feet • yd yards • nmi nautical miles <p>Example: -nonearth ft</p>
-output <base name>	<p>Allows you to:</p> <ul style="list-style-type: none"> • Specify a new base name for the output file (up to 6 characters) • Specify a different output directory from the current working directory • Specify a combination of 1 and 2. <p>Example: -output /mapinfo/soils where mapinfo is a directory and soils is the new name you give to the converted file.</p>
-help	<p>Allows you to print out a message describing these options.</p>
-verbose	<p>Allows you to print out program progress messages.</p>
-msg <file name>	<p>Tells ArcLink to write verbose and error messages to the specified file. New messages are appended to an existing msg file.</p>

The following options affect whether you want certain object types to be converted. Use the options if you do **not** want the feature converted. No option in the command string means that all feature types will be translated. These options only apply to the next file to be translated. If multiple files are batched together for translation, the mode is reset to convert all features after the first file is translated.

Option	Use Description
-lines	Tells ArcLink not to create a MapInfo line/polyline table from an ARC/INFO ARC table.
-polys	Tells ArcLink not to create a MapInfo region or points table from an ARC/INFO PAT table.
-geocode	Tells ArcLink not to create a MapInfo table with geocoding data from an ARC/INFO ADD table.
-node	Tells ArcLink not to create a MapInfo point table from an ARC/INFO NAT table.
-text	Tells ArcLink not to create a MapInfo table from an ARC/INFO table containing annotation with no attributes.
-tics	Tells ArcLink not to create a MapInfo table of registration points (tics) from an ARC/INFO TIC table.
-data	Tells ArcLink not to create a MapInfo table from an ARC/INFO table containing other data with no objects.

Keep the default options in mind. If you do not specify any options your export files will be converted to a MapInfo Professional table in TAB format in a non–earth coordinate system in meters, and all feature types will be converted. The output file will be written to the current working directory.

Conversion Considerations

This section discusses special considerations to be aware of while planning and carrying out a translation of ARC/INFO Export format to MapInfo Professional format using ArcLink, including:

- Conversion Equivalents
- Output File Conventions
- Complex Objects
- Disparate Polygons
- Redefined Items
- Text
- Character Sets
- Character Field Size
- Map Projection
- Default Display Characteristics
- Status File

Conversion Equivalents

ARC/INFO features will translate into MapInfo Professional features according to the following table:

ArcInfo	MapInfo Professional Format
points, nodes, tics	points
arcs	lines or polylines
polygons	regions
annotation	text
data	data with no graphic objects

Output File Conventions

ArcLink produces an output TAB file or MIF/MID file for every ARC/INFO attribute table (for example, AAT, PAT, NAT, TIC, etc.) that is converted. By default output files are placed in the current working directory with a name derived from the input file name, plus the following suffix:

Suffix	Indicating
“_line”	for lines and polylines derived from the ARC Attribute Table (AAT)
“_poly”	for polygons from the Polygon/Point Attribute Tables (PAT)
“_point”	for points from the Polygon/Point Attribute Tables (PAT)
“_node”	for points from the Node Attribute Table (NAT)
“_addr”	for geocoding derived from the Address Attribute Table (ADD). Creates three tables: addr, addr1.addr2 in a “StreetInfo–like” relational table format.
“_tic”	for registration points (tics) derived from the Tic Attribute Table (TIC)
“_text”	for text (annotation) with no ARC/INFO attributes
“_tat”n	where “a” represents converted text attributes (TAT) with no graphic objects and n is the number (0–9, a–f) of these tables that are converted
“_data”n	where “i” represents an info table of objects not covered in the above categories and n is the number of info tables brought over (0–9, a–f)

For example, you are converting an ARC/INFO Export file containing New York ZIP Code boundaries into TAB format. The output file would be:

```

newyork_poly.tab
newyork_poly.map
newyork_poly.dat
newyork_poly.ind
newyork_poly.id

```

For a conversion to MIF/MID files, the output file would be:

```
newyork_poly.mif  
newyork_poly.mid
```

Complex Objects

In Windows 3.x: ArcLink will not convert regions, polylines or multipolylines that contain more than 32,000 points due to a limitation in MapInfo Professional. In Windows 95, the maximum number of nodes for regions and polylines has been increased to 1,048,572 nodes for a single polygon region or polyline. The limit drops by seven nodes for every two additional polygons. ArcLink will convert the attribute data without any geographic object associated with it. ArcLink will write to the message file (arclink.msg) and indicate which object was too complex and could not be converted.

Disparate Polygons

MapInfo Professional considers disparate polygons, such as Hawaii, to be a single region containing multiple polygons. During conversion ArcLink breaks these regions into individual polygons. All attributes are duplicated and stored in each resulting polygon except for calculated fields such as area and perimeter.

Redefined Items

Redefined items in ARC/INFO are maintained during the conversion. They are duplicated as separate fields.

Text

Text that is converted with ArcLink is brought over without attributes. The identification number of the text is preserved in the text table. If ARC/INFO Text Attribute Tables (TAT) exist for the text, the information in the TAT is brought over as a table without graphic objects and is no longer related to the ARC/INFO annotation object from which it came. In Windows 3.x, the output file(s) will be designated using the suffix “a”n where “a” represents converted text attributes with no graphic objects and n is the number of converted tables. In Windows 95, the output file(s) will be designated using the suffix “_tat”n where “_tat” represents converted text attributes with no graphic objects and n is the number of converted tables.

If you wish, you can connect the text object table and the converted TAT information through the identification number. More than one TAT may exist for an ARC/INFO Export file. ARC/INFO text is more complex than MapInfo Professional text. During conversion ArcLink attempts to construct text to look as close as possible to the original ARC/INFO text. In addition, converted text will not be placed along a spline (curvy line). The first and second spline points will be used to calculate an angle along which the text will be placed. Text that is center and right justified in ARC/INFO will have its position approximated in MapInfo Professional. MapInfo Professional attempts to correctly read the text size of a converted Export file and generate the equivalent size. However, text size 0 in ARC/INFO, the default setting, has no direct correlation in MapInfo Professional. ArcLink will produce a warning message when this type of text is encountered, noting the text string involved

and its location. ArcLink will pick a text size, making a guess based upon the overall size of the export file. If you find the text size unacceptable when you display a converted file in MapInfo Professional, make the changes to the text size in MapInfo Professional and save the table.

Character Sets

ArcLink will only translate tables that have the same character set (or subset thereof) that is installed on the system where ArcLink is running. For example, to translate an ARC/INFO Export file containing Japanese Kanji characters, you must run ArcLink on a PC that is running the Japanese versions of Windows and MapInfo Professional. Since ASCII is a subset of double byte character sets, you can translate ASCII ARC/INFO Export files (such as English, German, Spanish) on a system supporting double byte characters sets (Japanese, Korean, Chinese).

ArcLink only supports the conversion of double byte character sets when converting files from ARC/INFO to MapInfo Professional.

Character Field Size

ARC/INFO files with character fields in excess of 254 characters will be truncated by ArcLink to 254 characters during conversion. This is due to the field size limit in MapInfo Professional.

Map Projection

You must specify the appropriate coordinate system or accept the default (non-earth in meters) at the Input Parameters dialog when selecting files for translation. Refer to the *MapInfo Professional User Guide* for more on coordinate systems.

ArcLink will properly translate any ARC/INFO Export file that carries a coordinate system that MapInfo Professional supports.

Default Display Characteristics

ArcLink will translate ARC/INFO features using MapInfo's default display styles, according to the following table:

Feature	Display Characteristics
Points	9 point solid black square
Lines	Thin, solid black line
Polylines	Thin, solid black line
Regions	Thin, solid black border, no fill
Text	System font. Text size approximates that of the original ARC/INFO text.

Status File

During translation, ArcLink automatically creates a message file, called arlink.msg, that contains the status of the conversion, including the number of objects created for each export file, error messages about unsuccessful conversions and other information about the process. Be sure to read the message file to get a complete understanding of how your files were converted.

This file is written to the same directory that you specified for the converted output files. If the arlink.msg file already exists, then messages for the current translation will be appended to it.

Converting MapInfo Professional Tables to ArcInfo

This chapter discusses the steps for converting MapInfo Professional TAB format files to ARC/INFO Export files. Instructions are provided for running ArcLink from Windows. The chapter concludes with some things to keep in mind when converting files from MapInfo Professional to ARC/INFO.

Topics in this Section:

- ◆ **Running ArcLink**20
- ◆ **Creating an Input File**.....23
- ◆ **Conversion Considerations**24

Running ArcLink

ArcLink runs from the MapInfo Professional Main menu as an add-on application. Like the conversion from ARC/INFO to MapInfo, you specify which tables you wish to translate. You have the option of adding related tables to the same ARC/INFO export file or converting them individually.

To run the ArcLink tool in MapInfo Professional:

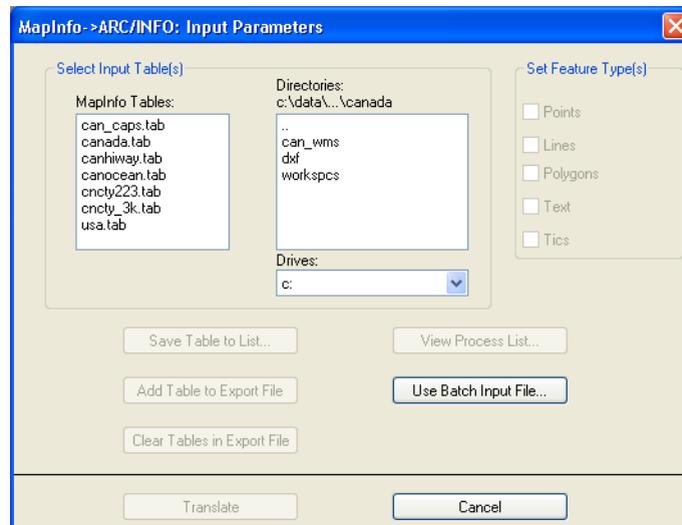
1. Open MapInfo Professional and choose **Tools > ArcLink**.
2. Choose **MapInfo > ArcInfo** and select the files you want to translate.
Change any output parameters from the default, such as output file type or projection (Optional).
3. Run the translator.

Each step is described below.

Step 1 Choosing MapInfo Tables to be Converted

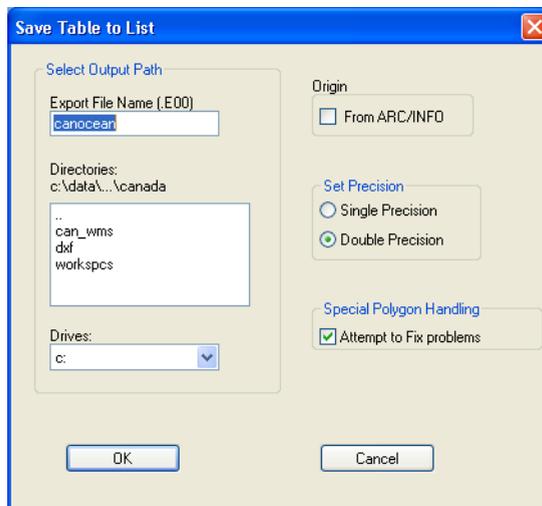
To specify which MapInfo tables you want to translate:

1. Choose **Tools > ArcLink > MapInfo > ArcInfo** from the Main menu. The Input Parameters dialog box displays.



1. Choose the drive and directory of the tables to be converted. To move up the directory tree, click on the double periods in the Directories list box. MapInfo TAB files display in the MapInfo Tables list box.

2. Choose a table by highlighting the file name.
Notice in the Set Feature Type(s) group ArcLink automatically checks the appropriate feature(s) contained in the selected table. If you do not wish to translate these features, clear the checkbox. When converting multiple tables, ArcLink will check to ensure the feature selections are legal (for example, two tables containing the same feature type cannot be translated into the same ARC/INFO export file).
3. With the table still selected, click the **Save Table to List** button. The Save Table to List dialog box displays. Tables are saved to a temporary file that ArcLink uses during the translation.



Note As a short cut, double-click on the table name to bring you directly to the Save Table to List dialog box.

4. Accept the Export path and file name or make changes in the appropriate list box.
5. If the tables originally came from ARC/INFO, check the Origin box marked **From ARC/INFO**.
6. Choose the appropriate precision.
Choose **Single Precision** if the translated tables will be used with PC-ARC/INFO. Coordinates will have 6–7 significant digits.
Choose either **Single** or **Double Precision** for Workstation-ARC/INFO. Double precision coordinates will contain 13–14 significant digits. Default is double precision.
7. Clear the **Attempt to Fix Problems** checkbox under Special Polygon Handling if you do not want ArcLink to fix self-intersecting polygons it may encounter in your table(s). See **Problem Polygons** in the **Conversion Considerations** section later in this chapter.
8. Click **OK** when you are through. You are returned to the Input Parameters dialog box.
9. Repeat steps 2–9 to choose additional MapInfo tables that you want translated to other output files during this session.

-
10. To include more than one file in the same export file (optional), select the file name and click the **Add Table to Export File** button for each table you want added. Choose the **Clear Tables in Export File** button to remove files from the list.

i **Important:** The tables you add to an export file should be related, that is, cover the same geography. They must also be in the same coordinate system. ArcLink will translate them and combine them into the same export file. You cannot add more than one of the same type of feature to an export list. ArcLink will not translate points and polygons in the same export file (ARC/INFO limitation).

11. As an option, instead of selecting individual files, you can specify an input file when you have many tables to convert. Choose the **Use Input Batch file** button and specify the file when prompted. To create a batch file, see [Creating an Input File](#).

Step 2 Running the Translator

When you have selected and saved all the tables you wish to translate, click the **Translate** button from the Input Parameters dialog box. A progress bar displays indicating the translation is proceeding. Messages indicate each stage of the conversion.

i The **Translate** button is only available after you have made your table selections in the Input Parameters dialog box.

During translation, ArcLink creates a status file, called ARCLINK.MSG, that contains the status of the conversion, including the number of objects created for each export file, error messages about unsuccessful conversions and other information about the process. This file is written to the same directory that you specified for the converted output files. If the arlink.msg file already exists from previous translation operations, the new messages will be appended to the file.

Step 3 Exiting ArcLink

When you have completed the file conversion process, choose **ArcLink > Exit ArcLink**. This closes ArcLink and removes the program from the MapInfo Professional menu bar.

Creating an Input File

As an alternative to individually choosing MapInfo tables in the Input Parameters dialog box, you may wish to use a file that already contains a list of tables you wish to translate. The process of creating this file is the same as selecting and saving files to the temporary file, with the additional step of making the temporary file into a permanent text file.

To create an input file:

1. Follow the steps in **Step 1 Choosing MapInfo Tables to be Converted** to select and save the tables you wish to include in one export file.
1. Repeat for tables in a second export file. Continue to select and save tables for each additional export file.
2. At the Input Parameters dialog box choose the **View Process List** button. The View Process List dialog box displays. The table(s) you wish to include in the input file is shown with its object type, file name and output parameters.
3. Choose the **Save List to Batch File** button to save this information as an input file for future processing. The Save List to Batch File dialog box displays.
4. Specify the appropriate path and file name for the input file.
5. Click **OK**. You are returned to the View Process List dialog box.
6. Click **OK** again to return to the Input Parameters dialog box.
7. Click the **Use Batch Input File** button, specify the batch file and choose the **Translate** button to begin processing the file. To leave the Input Parameters dialog box without processing choose **Cancel**.

Creating a Batch File by Hand

You can also create the batch input file by hand, by including the TAB files and conversion options in a text file. Use one line for each file and string the options together with a space between. See the illustration below. The available options are described in the chart.

Option	Use/Description
-ai	Use if the TAB file originated in ARC/INFO and was converted to TQAB files using ArcLink. Specify this option once for each output export file. Default is no - ai
-poly <file name>	Tells ArcLink that the TAB file contains region objects.
-point <file name>	Tells ArcLink that the TAB file contains point objects.
- arc <file name>	Tells ArcLink that the TAB file contains polylines.
-tic <file name>	Tells ArcLink that the TAB file contains tics (registration points).

Option	Use/Description
- text <file name>	Tells ArcLink that the TAB file contains text.
- help	Allows you to print out a message describing these options.
- input <file name>	Allows you to use an input file that contains a list of tables to process and their options. Use this when you have many files you want converted at the same time.
- msg <file name>	Tells ArcLink to write verbose and error messages to the specified file.
- fix	Tells ArcLink to attempt to fix problem polygons (default).
- nofix	Tells ArcLink not to attempt to fix problem polygons.
-precision SINGLE -precision DOUBLE	Allows you to choose single or double precision for coordinates' significant digits. For PC-ARC/INFO use single precision, for workstation ARC/INFO choose either single or double precision. Default is double.
- verbose	Allows you to print out program progress messages.

Conversion Considerations

This section discusses special considerations that you should be aware of while you are planning and carrying out a translation of MapInfo TAB files to ARC/INFO Export files, including:

- Topology
- Problem Polygons
- Conversion Equivalents
- Output File Convention
- Object Types
- Relational Tables
- Text
- Character Sets
- Tics
- Export Fields
- Status File

Topology

ArcLink creates "ARC/INFO friendly" topology when converting MapInfo TAB files to ARC/INFO. This means it takes MapInfo Professional's list of points that make up a polygon and converts it to a list of arcs that ARC/INFO can recognize as a polygon. It will probably not be necessary in ARC/INFO to run a BUILD or CLEAN operation on the output.

Problem Polygons

This section covers several types of polygons that ArcLink may or may not be able to detect or translate, including self-intersecting polygons, overlapping polygons, zero area polygons, and coincident polygons.

ArcLink will detect self-intersecting polygons where the intersection falls at a point. In the majority of cases, ArcLink will fix the self-intersection as well, provided that the Attempt to Fix Polygons option has been set during translation setup. ArcLink attempts to rebuild these objects (commonly called “figure eights”) by untwisting the polygon at the crossover point and reordering the points to maintain the correct topology. No data is lost during this process. If ArcLink cannot rebuild the polygon, it will write a message to the status file indicating the row number and coordinates for the point of the self-intersection.

ArcLink cannot, however, fix self-intersecting polygons that do not intersect at a point. If ArcLink detects such an object, the translation process for that table will halt. If ArcLink does not detect these objects, the translation will continue; however, the topology of the surrounding polygons will be incorrect.

The same is true for overlapping polygons. If ArcLink detects one, it will not be able to build the topology and the translation process will stop. If ArcLink does not detect the overlapping polygon and attempts to build the topology, the topology for the localized area will be incorrect.

ArcLink detects “zero area” polygons, or slivers, and removes them from the table during translation. It will also write a message to the status file indicating the row number and coordinates of the object that have been deleted.

A coincident polygon is a polygon that overlaps another polygon at some or all of the same points. When ArcLink detects these objects, it eliminates them from the table. A message will be written to the status file indicating this has occurred.

Since ArcLink may alter data in an attempt to fix some problem polygons (e.g., removing slivers and coincident polygons), you may choose to have ArcLink not fix your data. ArcLink will provide information in the status file identifying where problems exist. You may then elect to fix the problems in the MapInfo tables and attempt to translate again.

Conversion Equivalents

MapInfo tables features will translate into ARC/INFO features according to the following table:

MapInfo	ArcInfo
points	points
lines or polylines	arcs
regions	polygons
text	annotation
control (registration points)	tics

Output File Convention

During translation ArcLink will create an uncompressed Export file with the extension .E00. Each output file equals one export file that may or may not contain more than one type of object (depending on what you specified at input). When necessary, ArcLink will create split Export files with extensions .E00 up to .E99.

Object Types

ArcLink can automatically determine the type of object contained in the MapInfo table. You can choose not to convert all of the types in a table. ArcLink will not create an export file with the same object types from two different tables. It will ignore the second table. ArcLink does not convert points and polygons in the same export file (ARC/INFO limitation).

Relational Tables

ArcLink converts StreetInfo-type relational tables that contain polylines and address information into ARC/INFO export files. However, ArcLink will not create ADD blocks, only ARC and AAT blocks.

Text

Text that is converted with ArcLink is brought over without attributes.

Character Sets

ArcLink 3.1 is not guaranteed to correctly convert data containing non-ASCII data (for example, double byte characters) when converting MapInfo tables to ARC/INFO export files.

Tics

ARC/INFO requires a tic table for every export file. If you do not specify any tic objects to be converted, ArcLink creates a bounding box for the export file and treats those points as tics.

Coverage Fields

If you are converting MapInfo TAB files that were originally created as ARC/INFO files, you may wish to retain the original fields for User ID and ARC/INFO ID. In the Input Parameters dialog check the box marked From ARC/INFO. During the translation ArcLink will retain the original User ID and ARC/INFO ID field names and recalculates other fields. If you do not tell ArcLink that the tables originally came from ARC/INFO, these fields will be duplicated and given new ID values.

Status File

During the translation process, ArcLink automatically creates a status file, called `arlink.msg`, that contains information about the conversion including successfully converted files, the number of created objects, error messages, etc. This file will be written to the output directory you specified during setup. If the `arlink.msg` file already exists, messages from the current translation operation will be appended to it.