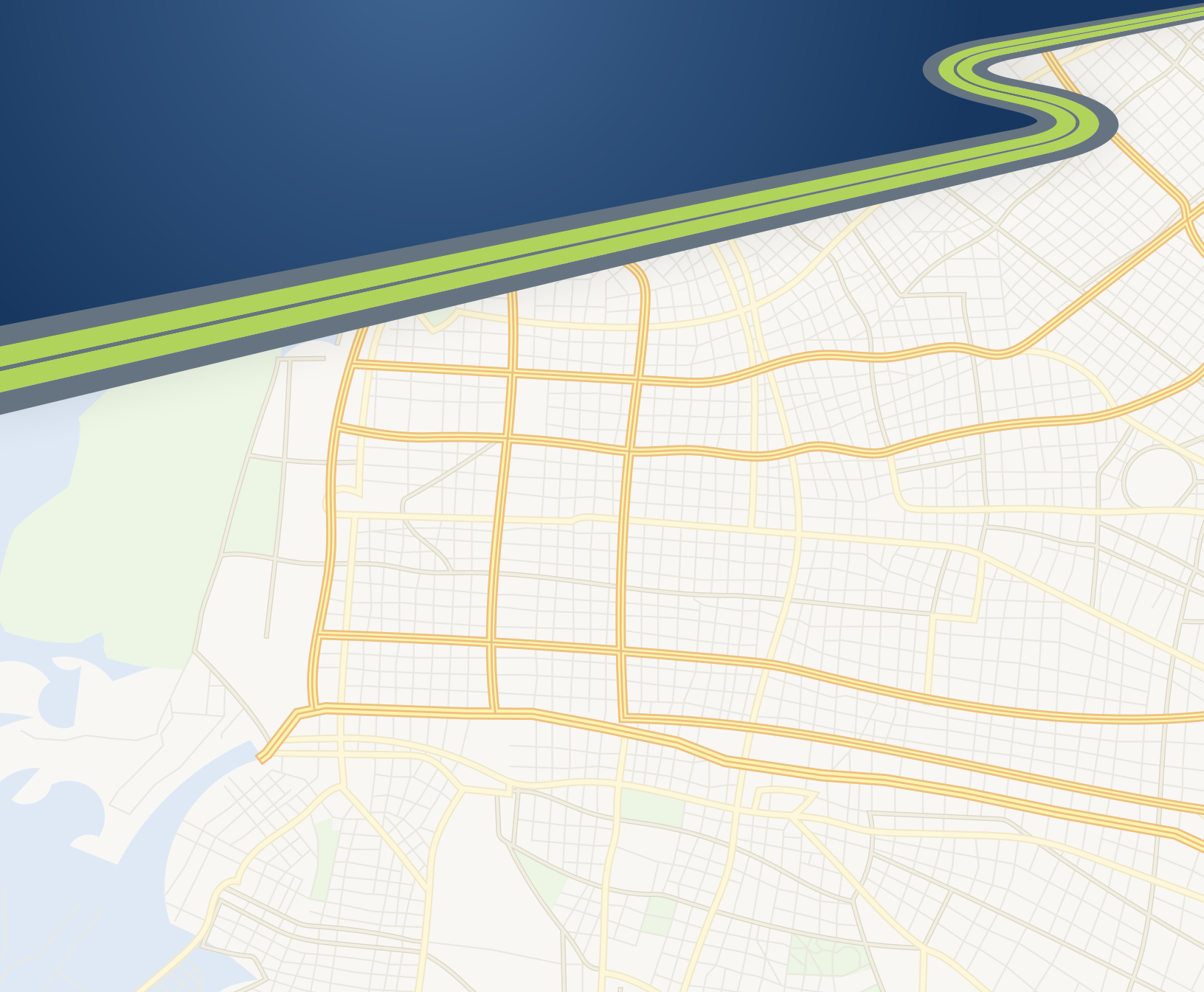


User's Guide



Technology Beyond Miles





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PC*MILER|BatchPro is a batch processing module created for use with PC*MILER. BatchPro gives PC*MILER the power and flexibility to handle tasks involving the processing of large volumes of origin/destination records. Instead of entering and running routes one-by-one as you normally would in PC*MILER, a large database of origin/destination records created using an electronic spreadsheet program, a database management program, or a text file editor, can be processed automatically using BatchPro.

The module works as follows: the name of your input file is entered in BatchPro. When processing is initiated, BatchPro then produces report files with the same name and different extensions. These output files are placed in the directory in which the input file is located.

NOTE: With BatchPro, it's possible to create an extensive mileage database. Under the provisions of your license agreement, any such database must remain on the same computer platform on which PC*MILER is installed. The transfer or porting of data to another computer platform or to a third party is strictly prohibited without the written consent of ALK Technologies, Inc.

BatchPro can be licensed for use on a LAN. See your sales agent or call ALK for details.

1.1 System Requirements

PC*MILER|BatchPro requires a base installation of PC*MILER, PC*MILER|Streets or PC*MILER|Worldwide. For a complete list of PC*MILER platforms and requirements, see the PC*MILER *User's Guide*. (To access the *User's Guide*, see *Installation* below.)

Additionally, the BatchPro application requires **4 MB extra free space** on your hard disk.

1.2 Installation

PC*MILER|BatchPro is a separate PC*MILER add-on product that can be purchased and installed with PC*MILER or at a later time. To install BatchPro along with PC*MILER, you simply make sure that “**BatchPro**” is on the list of PC*MILER components when you are prompted during the installation process.

If you are adding BatchPro at a later time, see the *Getting Started Guide* available at www.pcmiler.com/support, or the *PC*MILER User's Guide* that was included with the PC*MILER installation. To access the *User's Guide*, see section 1.4 below.

To open PC*MILER|BatchPro after installation, click on the Windows **Start** menu, go to **Programs > PC*MILER 29** and choose “**BatchPro**”.

1.3 Technical Support

ALK Technologies offers one year of free unlimited technical support to all registered users of PC*MILER. If you have any questions about PC*MILER|BatchPro or problems with the software that cannot be resolved using this *User's Guide*, contact our Technical Support team:

Phone: 1.800.377.6453, ext. 2, or 609.683.0220, ext 2

Fax: 609.252.8196

Email: pcmsupport@alk.com

Web Site: www.pcmiler.com

Hours: 9:00am – 5:00pm EST, Mon-Fri

When calling, ask for “PC*MILER Technical Support”. Please be sure to have your PC*MILER|BatchPro Product Key Code, version number, Windows version number, and hardware configuration information (manufacturer, speed, and monitor type) available before your call. Please include this information in your message if you are contacting us by email.

1.4 Accessing User's Guides for PC*MILER Products

NOTE: You must have Adobe Acrobat Reader on your computer to properly view a PC*MILER product's user guide. If you do not have this program installed already, a free copy can be downloaded from www.adobe.com.

To make Adobe Reader your default reader, from within the Adobe Reader application select the Edit menu > Preferences > General and click **Select Default PDF Handler**. Select Adobe Reader from the drop-down, and click **Apply** then **OK** to close the Preferences dialog.

To view the user guide for any PC*MILER product without first opening an application, click the Windows **Start** button > **All Programs** (or the equivalent on your system) > **PCMILER 29** > *User Guides* and select one of the .pdf files from the sub-menu.

To search for a keyword or phrase in a user guide, use Adobe Reader's **Find** option in the Edit menu or on the tool bar.

All user guides can also be accessed at www.pcmiler.com/support.

1.5 Recent Enhancements and New Features

ENHANCED in Version 29!... “General” Hazmat Route Type Changed to “Other”. For those who use PC*MILER for hazardous material routing, the General route type has been renamed “Other”. The new name more accurately reflects the variety of hazardous materials that are suitable for this route type, especially for our customers in Europe.

No new features were added in PC*MILER|BatchPro Version 28.

NEW in Version 27! Time-Based Routing. PC*MILER|BatchPro users can now specify time and day-of-the-week parameters when calculating routes, distances, travel times and toll costs for large numbers of origin/destination pairs. Optionally, traffic data may also be used to increase the precision of travel time calculations.

NEW in Version 26! Fastest Routing. In addition to the standard Practical and Shortest routing types, PC*MILER|BatchPro now provides a Fastest routing type. When Fastest routing is selected, highway and street-level* data are used in conjunction with Inrix® real-time and/or historic traffic data to calculate the quickest route to the trip’s destination(s). Users who ship time-sensitive freight can select a Fastest route that may be longer in distance but save time over the standard Practical route.

** PC*MILER|Streets must be installed for street-level routing.*

NEW in Version 25! Mexican Postal Codes. Mexican postal codes are now accessible in the PC*MILER database. Since U.S. ZIP codes and Mexican postal codes share a similar format, a new pcmbatch.cfg setting is now available to ensure that the entered ZIP/postal code matches the desired location.

NOTE: The **pcmbatch.cfg** file can be found in the PC*MILER installation folder, usually **C:\ALK Technologies\PCMILER29\BatchPro**.

[Route Options]
"ZipCodeOption"=

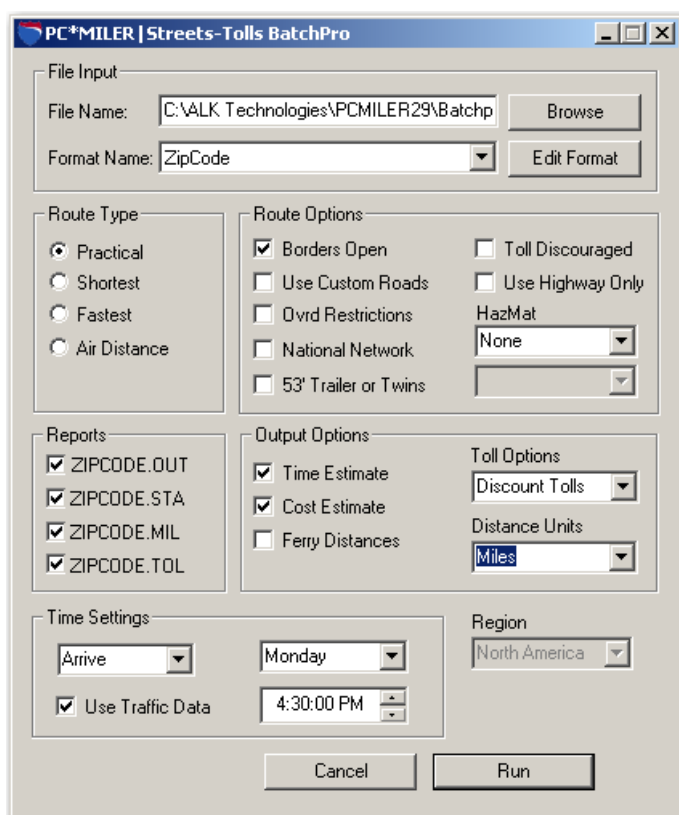
Possible values are:

=0 – Use default US ZIP Code (this is the default value)
=1 – Use default Mexico Postal Code
=2 – Use default US and Mexico ZIP Code

To open the PC*MILER|BatchPro user interface, click the Windows **Start** menu and select *Programs > PCMILER 29 > BatchPro*. To begin using BatchPro, you need an input file containing the origin/destination pairs for which distances are to be calculated (see section 2.1, *Input File Creation*).

The first step in running BatchPro is input file selection (see section 2.2, *Input File Selection*); next is format creation and selection (see section 2.3, *Format Creation and Selection*). Finally, you select various routing and output options (see section 2.4, *Setting Options*) and then process the data.

BatchPro's main window is shown below. Note that **Hazmat** options are available only with the purchase of ALK's Hazardous Material Routing add-on data module; the **Use Local Streets** option under **City/Zip Routing** is available only if you have ALK's PC*MILER|Streets address data add-on installed; and the **Tolls** option is available only with the purchase of PC*MILER|Tolls.



PC*MILER|BatchPro Main Window

2.1 Creating an Input File

Data is input into BatchPro in the form of a flat, ASCII text file. Each line in this file must contain an origin/destination pair, which can be in the form of postal codes, city/state names found in PC*MILER's database, Canadian Postal Codes (available through a PC*MILER add-on data module), SPLC (available through a PC*MILER add-on data module), or latitude/longitude points. There is no limit to the character length of input data. Files in which information is mixed are permitted. To see sample files, look in your BatchPro installation directory for files with the extension “.in”.

If your input file includes **Mexican postal codes**, you may need to change the *ZipCodeOption* setting in the pcmbatch.cfg file. Please see section 1.5 for details.

IMPORTANT NOTE: Your input file **should not be tab-delimited** or have tabs in it. It's best to save the file in a space-delimited format.

NOTE for PC*MILER|Streets Users: Local street addresses in an origin/destination pair must be separated from the city or lat/long data by a semi-colon. For example:

**Princeton, NJ;974 Lincoln Highway
08540; 974 Lincoln Highway**

In BatchPro, any unique file name can be used for your input file.

Input files corresponding to the criteria stated above can be created in a number of ways. Your data may already exist in a database created by using an electronic spreadsheet program such as Microsoft Excel® or Lotus 1-2-3®, or a database management software program. If this is the case, follow the manufacturer's instructions for saving the spreadsheet or database file as a text file. Once it is saved as a text file, you can use a text file editor to modify the format if necessary.

If you don't already have your data stored in a computer database, you can create an input text file from scratch using a text file editor program. Alternatively, you can use **PC*MILER's Route Save** feature.

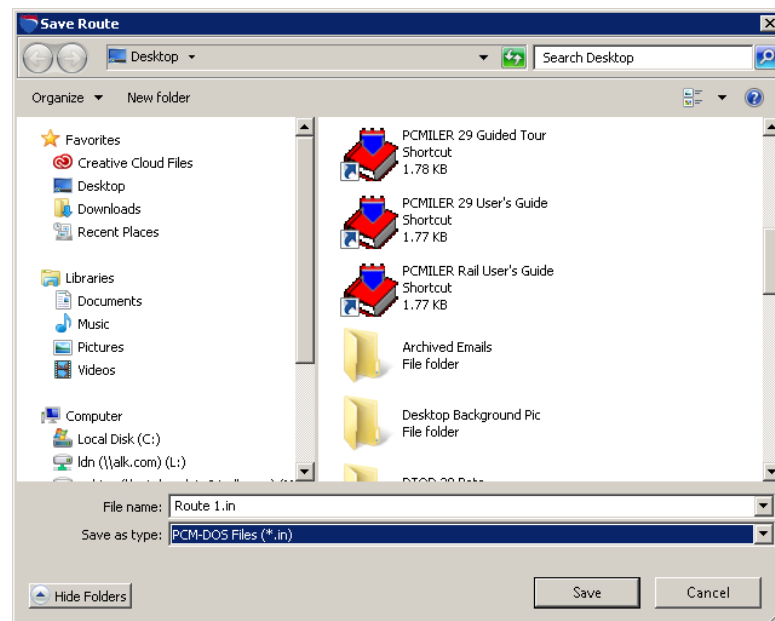
2.1.1 Saving Routes as *.IN Files for BatchPro

You can create BatchPro input files using PC*MILER. In the PC*MILER user interface, do the following:

1. Open a route entry window.

2. Enter your origin, destination, and any intermediate stop-off points, using either postal code, city/state, SPLC, or latitude/longitude input as you would if you were generating a route.
3. Select the Routes tab > Route group > *Save* > *Save Route As...* to open the Save Route window.
4. In the Save Route window, select "**PCM-DOS files (*.in)**" from the drop-down **Save as type** drop-down.
5. Type in a **File Name**.
6. Select a location where you want to save the new **.in** file.
7. Click the **Save** button to close the window and save your route.

NOTE: When intermediate stop-off points are used in the creation of a Route Save file, the first stop-off point will serve as the *destination* point of the *first* record and the *origin* point of the *second* record. The second stop-off point will serve as the *destination* point of the *second* record and the *origin* point of the *third* record, and so on.

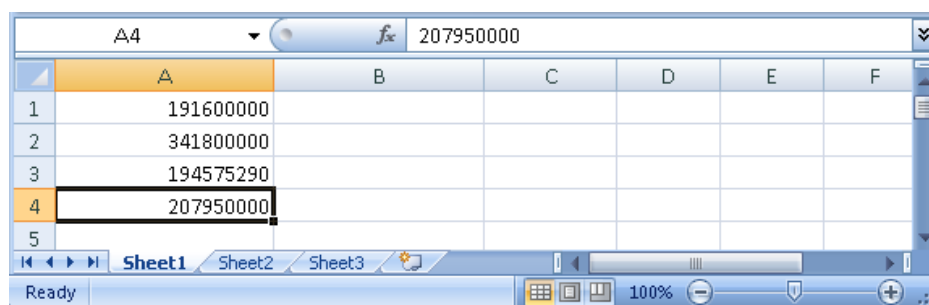


Save Route Dialog

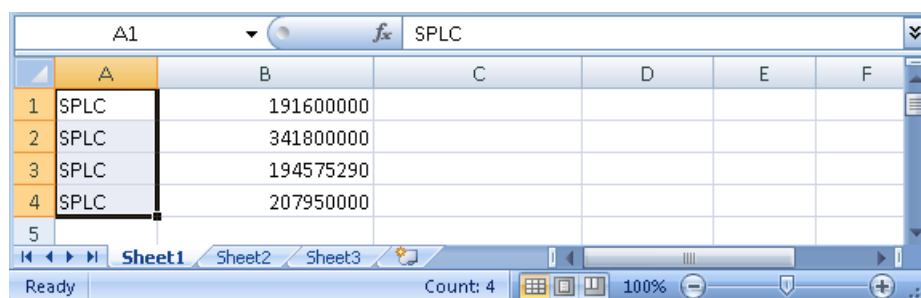
2.1.2 SPLC Input

When the origin/destination pairs in your input file are SPLC's, each 9-digit code must be preceded by "SPLC"; e.g. SPLC376123250. To use Microsoft® Excel to quickly change a text file of SPLC O/D pairs into a properly formatted input file for BatchPro, follow the steps below. (Consult the online Help for Excel if you don't know how to insert a column, format cells, or enter a formula in Excel. Note that this task can also be accomplished directly in a text editor without the use of Excel.)

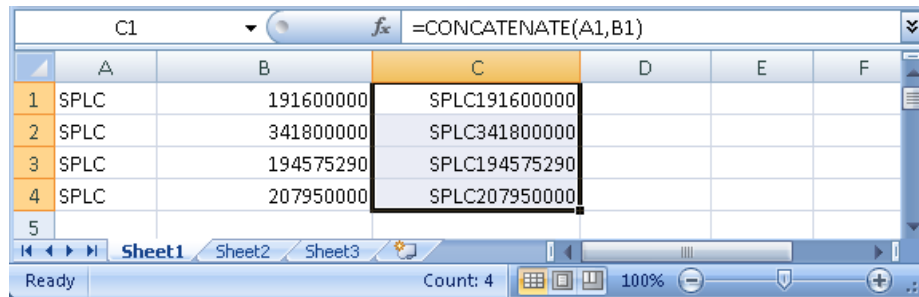
1. To begin, first copy the text file into Excel, with one column for origins and another column for destinations. There should be at least one blank column to the right of the column that is populated with origins. In this example, column A is a list of origins:



2. Insert a new column to the left of column A (right click > *Insert*).
3. In the new column, add "SPLC" to each row that has a SPLC in it. To do this quickly, type "SPLC" in cell A1, then click and drag the bottom right corner of the cell down the column (the cursor will become a plus sign). Let go when all target cells are populated with "SPLC".



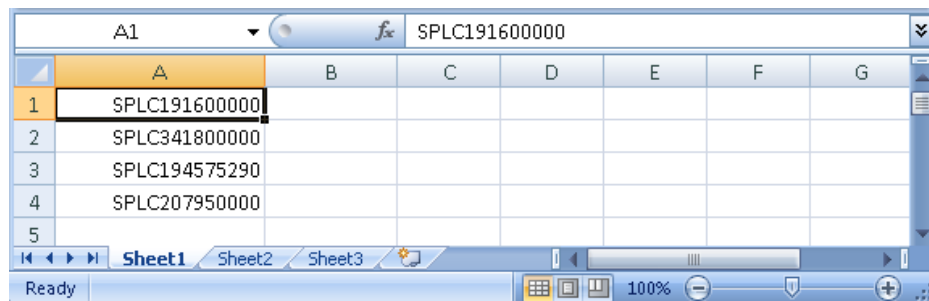
4. Select a third column to the right (column C in this example) and make sure the cells are formatted as "**General**" or "**Number**".
5. In cell C1, manually enter the following formula:
=CONCATENATE(A1,B1)
6. Copy the formula down the remainder of the column as in Step 3.



7. With the third column selected, right click and select “**Copy**”.
8. With the column still highlighted, right click and select “**Paste Special**”.
9. In the dialog that opens, select **Values** and hit **OK**.



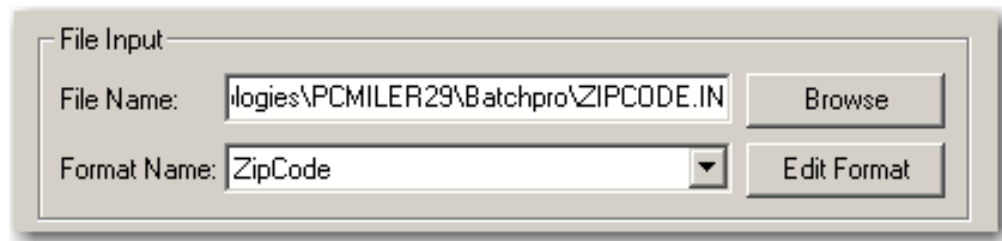
10. Delete the first two columns. Your SPLC list is now correctly formatted.



11. For the destination SPLC’s, follow steps 1-10 starting with the column that contains the destinations.
12. When the O/D columns are correctly formatted, save the Excel file as a .PRN file.

13. Rename the .PRN file, changing the extension “.prn” to “.in”. The file is now ready to be imported into BatchPro.
14. After you select the file in BatchPro (section 2.2 below), select “**SPLC**” in the **Format Name** menu.
15. Click **Edit Format**.
16. Make sure that the **Start Position** and **End Position** for each column match the positions in your file. Create a new custom format if necessary, see section 2.3 below.

2.2 Input File Selection



File Input Area, Main Window

If you know the name and location of your input file, you can type this information into the **File Name** entry field at the top of the main window. Otherwise, click on the **Browse...** button to open a standard Windows dialog box that allows you to select the input file of your choice. Your input file should have the extension “**.in**” and be in the form of a flat, ASCII text file (see section 2.1).

Select the file and click **Open**. The file name and location will populate the File Name field.

2.3 Creating or Selecting a Format

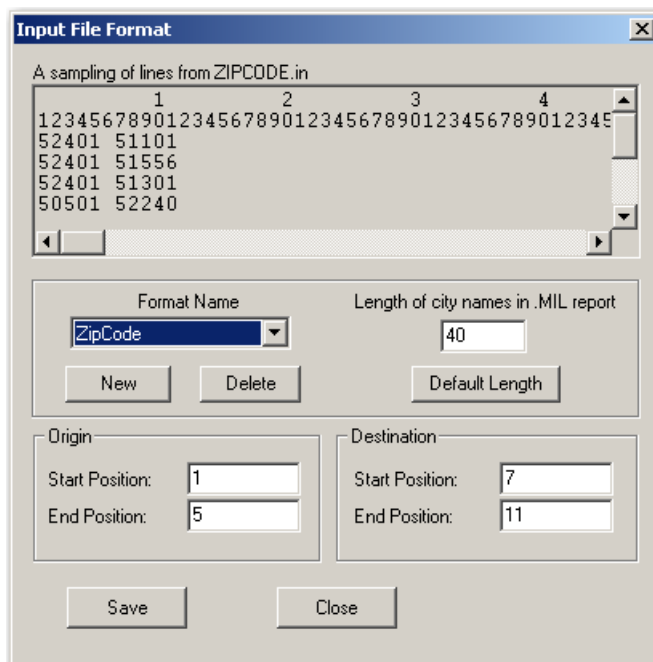
Once you’ve chosen an input file, you must either select a format to use from the **Format Name** drop-down menu, or create a new format. This format will tell BatchPro where to look in your input file for the route origin and destination data.

BatchPro comes with standard formats for input files that contain data in postal code, city/state, Canadian Postal Code, SPLC, and latitude/longitude forms, and input files created by using Save Route in PC*MILER or PC*MILER|Worldwide.

To create a new custom format, click on **New Format...**

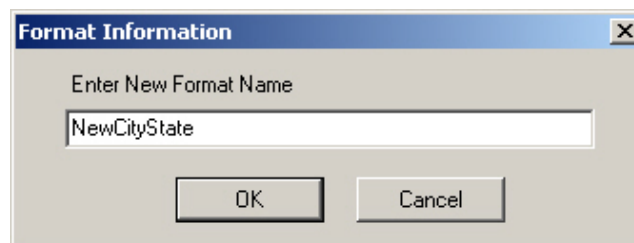
In the Create Format window, BatchPro displays the first four lines of your selected input file. Use the numbered row at the top to see at which columns the origin and destination data begin and end. The **Origin Start** number tells BatchPro which column of each line will contain the first character of the origin information; the **Destination Start** number gives the column where the destination information will begin. The **Origin End** number tells BatchPro the maximum endpoint that any origin name can have; the **Destination End** number gives the maximum endpoint.

To prevent the appearance of truncated city names in reports, type the number of city name characters to allow in reports in the box under **Length of city names in .MIL reports**. The default length is 40.



Input File Format Dialog

If you know that you'll want to use the same format again, you might want to save the format. To do this, click **New**. At the prompt, type a name for your format and then click **OK**. In the future, you'll be able to select this saved format from the **Format Name** drop-down in the main BatchPro window.



Entering a New Format Name

Click **Save** to save your input and exit the Create Format window. (If you did not give this format a name and save it as described above, it will only be used to process the current file.) To cancel without saving your input, click **Close**.

2.4 Route Options

The screenshot shows the 'PC*MILER/BatchPro Routing Options' dialog box. It is organized into several sections: 'Route Type' with radio buttons for 'Practical' (selected), 'Shortest', 'Fastest', and 'Air Distance'; 'Route Options' with checkboxes for 'Borders Open' (checked), 'Use Custom Roads', 'Ovrd Restrictions', 'National Network', and '53' Trailer or Twins', and dropdowns for 'Toll Discouraged', 'Use Highway Only', 'HazMat' (set to 'None'), and an empty dropdown; 'Reports' with checkboxes for 'ZIPCODE.OUT', 'ZIPCODE.STA', 'ZIPCODE.MIL', and 'ZIPCODE.TOL' (all checked); 'Output Options' with checkboxes for 'Time Estimate' (checked), 'Cost Estimate' (checked), and 'Ferry Distances'; 'Toll Options' with a dropdown set to 'Discount Tolls'; 'Distance Units' with a dropdown set to 'Miles'; 'Time Settings' with a dropdown set to 'Arrive', a date dropdown set to 'Monday', a time spinner set to '11:13:05 AM', and a checked 'Use Traffic Data' checkbox; and a 'Region' dropdown set to 'North America'. At the bottom are 'Cancel' and 'Run' buttons.

*PC*MILER/BatchPro Routing Options*

2.4.1 Route Type

To select a PC*MILER route type for BatchPro's route calculations, first click one of the radio buttons for **Practical**, **Shortest**, **Fastest** or **Air Distance**. Practical, Shortest or Fastest routing can also, optionally, be combined with **Toll Discouraged**, **National Network**, and/or **53' Trailer** routing (U.S. only). Note that when 53' Trailer routing is selected, the National Network is automatically included – but not necessarily vice versa.

Practical Routes

PC*MILER Practical Routes represent distances and driving routes that a driver would normally take to minimize time and cost. Practical Routes model the trade-

off between taking the most direct path and staying on major, high quality highways. Interstate highways are given a higher priority than toll roads, which in turn are given a higher priority than secondary highways, and so on. Routing instructions and mileage can be used when actual travel distances and directions are needed.

PC*MILER Practical routings consider distance, road quality, terrain, urban/rural classifications, truck-restricted roads, and designated principal and secondary through routes.

PC*MILER Practical Route mileage and state-by-state mileage breakdowns can be used to supplement your regular fuel tax reporting documents for many states. Many state audit departments have purchased licenses to incorporate PC*MILER into their audit procedures.

NOTE: A PC*MILER user may still be assessed additional taxes even by those states using PC*MILER in their audit procedures. However, your chances of being assessed additional taxes greatly diminishes by utilizing a computerized mileage system in conjunction with your driver logs, trip sheets, invoices, and bills of lading.

In order to minimize the possibility of significant tax assessments, you must verify that the PC*MILER-generated route is the *same* as that reported on your driver logs and/or trip sheets. In addition, the carrier must add the appropriate vicinity miles to the PC*MILER generated mileage so that the following equation is true:

TOTAL ODOMETER MILES = PC*MILER Miles + Vicinity Miles

NOTE: PC*MILER accounts for some vicinity miles if non-Keypoints (generally postal code locations and/or place names not associated with the downtown metropolitan area) are used as stop-off locations.

ALK Technologies continues to work closely with the member states of the International Fuel Tax Agreement (IFTA) and the International Registration Plan (IRP). Currently there are over 40 IFTA/IRP states using PC*MILER as an auditing tool in their fuel and mileage tax audit procedures.

Shortest Routes

PC*MILER Shortest Routes represent distances and driving routes that a vehicle would take to minimize total distance traveled while still following a reasonable route. For instance, Shortest Route mileage and routes will also avoid truck-restricted roads and, in some cases, may favor a beltway rather than travelling directly through a city.

ALK maintains that carriers and shippers alike would all be better served by using a mileage tariff based on *actual miles traveled* (i.e. similar to those generated

using the PC*MILER Practical Route option), which would more accurately reflect true transportation costs.

Fastest Routing

*(PC*MILER/Traffic must be installed and activated – see the PC*MILER User's Guide for more information.)* In addition to the standard Practical and Shortest routing types, PC*MILER|BatchPro now provides a Fastest routing type. When Fastest routing is selected, highway and street-level* data are used in conjunction with Inrix® real-time and/or historic traffic data to calculate the quickest route to the trip's destination(s). Users who ship time-sensitive freight can select a Fastest route that may be longer in distance but save time over the standard Practical route.

** Requires an installation of PC*MILER/Streets*

Air Distance

PC*MILER Air Distance represents the shortest distance in a straight line from one point to another, “as the crow flies”.

National Network Routing

NOTE: The suggested National Network routings are based on official highway maps, the Code of Federal Regulations, and information provided by state governments. It is provided without a warranty of any kind. The user assumes full responsibility for any delay, expense, loss, or damage which may occur as a result of its use.

Also NOTE: There are no National Network road segments outside of the United States.

The National Network is a U.S. government-designated system of highways originally established by the Surface Transportation Assistance Act of 1982. This routing option is based on the federally-designated National Network system updated in the April, 1992 Code of Federal Regulations, Part 658, Appendix A. The National Network includes the Interstate System (several minor segments are not included), and many selected US and state highways. Highways continue to be added to the National Network by federal and state governments.

PC*MILER National Network routing represents distances and driving routes which are most reasonable and legal for the larger trucks authorized by the Surface Transportation Assistance Act of 1982.

National Network routing stays on the National Network **to the maximum extent possible**. Given that many areas are not directly served by the National Network, the origin and stop-offs of your route may not be on the National Network. In these cases PC*MILER will take the shortest reasonable path from the origin and stop-offs to the Network. PC*MILER National Network routing will flag with a question mark (?) any road segments not designated as National Network in the detailed route report. Those road segments should be checked before travel.

National Network mileage tend to be higher than Shortest or Practical mileage. These designated highways permit, at a minimum, 102" wide, single 48 ft. trailers and tandem 28 ft. trailers. The Interstate system and most, **but not all**, remaining designated routes are open to 80,000 pound vehicles. Certain states, notably Arkansas and Mississippi, have designated certain National Network segments with less than an 80,000 pound capacity.

In addition to the National Network highways, *access routes* and *access policies* are components of routing STAA dimensioned trucks. The Federal government has mandated that no state may prohibit travel from the National Network for a minimum of one road mile unless safety restrictions apply. Also, no state may deny reasonable access to terminals and facilities for food, fuel, repairs and rest.

Several states maintain more generous access policies and lists of specifically designated access routes to terminals and facilities. (For detailed information about pre-approved access routes, contact individual jurisdictions.) Should you need to travel beyond the National Network and beyond the access roads, you must acquire the proper permit.

53 Foot Trailer and Twins Routing

Because every mile equals money, PC*MILER now offers enhanced routing specifically for 53'/102" trailers. The calculations for these routes are based on National Network routing, with the addition of roads that permit 53' trailers.

Toll Discouraged Routing

For carriers who desire to avoid long stretches of toll roads, ALK provides a Toll Discouraged routing option. Toll Discouraged routing will avoid long stretches of toll roads but will not take long, impractical detours to avoid toll bridges and tunnels. For example, a routing from Boston, MA to Albany, NY will avoid the Massachusetts Turnpike, but a routing from Camden, NJ to Philadelphia, PA will include a toll bridge.

2.4.2 Distance Units

BatchPro will report the distances between cities in the units you prefer. Use the drop-down to select **Miles** or **Kilometers** as a unit of measure for the distances that will be generated.

2.4.3 HazMat Options

These options for hazardous material routing are available if you purchased ALK Technologies' PC*MILER|HazMat add-on module. See the PC*MILER *User's Guide* for detailed descriptions of these route types and additional information pertaining to hazardous material routing.

2.4.4 Toll Options

*(Available only if the PC*MILER/Tolls add-on module is installed.)* Either “**Cash Tolls**” or “**Discount Tolls**” must be selected in the **Toll Options** drop-down for toll fees to be calculated, and the **.TOL** report option must be checked to generate output that includes toll amounts for each origin-destination pair. (Note, though, that the **.STA** (state summary) report does include tolls by state and a total toll cost for all O/D pairs.) See the PC*MILER *User's Guide* for details on toll calculation and discount programs.

2.4.5 Use Highway Only

This feature allows you to customize the way distances are calculated.

NOTE: This option is available only if PC*MILER| Streets data is installed.

When this option is checked, routes are calculated using an air distance from the midpoint of the nearest highway segment to the local street address. If only ZIP codes or city/states are used for origins/destinations, this routing will match PC*MILER highway routing. If the option is left unchecked, the routes and driving distances are calculated using local streets between the nearest highway segment and each stop.

2.4.6 Region

For PC*MILER, the region is North America. If using PC*MILER|Worldwide, select one of seven world regions from the drop-down (North America, South America, Africa, Asia, Europe, Middle East or Oceania).

2.4.7 Reports

Check one or more BatchPro output file types. Output files will have the same name as your input file, and will be differentiated by their extensions. They are placed in the folder where your input file is located. For a description of each of these file types, see section 2.5, *Output Files*. Output file types are:

- The appended mileage output file has the extension **.OUT**.
- The state summary file has the extension **.STA**.
- The mileage file has the extension **.MIL**.
- The toll calculation file has the extension **.TOL**.

2.4.8 Additional Options

These additional BatchPro route and output options are available:

- Check **Borders Open** to have BatchPro process your input file with open borders. This option refers to Intra-US, Intra-Canada, and Intra-Mexico routing. If Borders Open is checked, the route you generate will ignore international boundaries when necessary to come up with the best route. If this option is not checked, the borders will not be crossed; for example, if all your stops are in the United States, the resulting route will stay in the United States even though the most practical or shortest route would normally involve some Canadian mileage.
- Check **Use Custom Roads** to have BatchPro use any custom road settings that were set in PC*MILER (including avoids/favors, truck restriction overrides, and hazmat permits). See the PC*MILER *User's Guide* for more details about custom settings.
- Check **Ovrd Restrictions** (“Override Restrictions”) to generate routes that waive truck restrictions pertaining to specific sizes and weights, but that continue to avoid truck-prohibited and truck-discouraged roads. When this option is active, all height, length, width and weight restrictions will be overridden.

By default this option is not checked, in which case PC*MILER routing will avoid truck-prohibited and truck-discouraged roads, as well as truck-restricted roads that pertain to the size and weight set in the current vehicle dimensions or profile set in the PC*MILER user interface.

NOTE for PC*MILER|Streets Users: An error message will appear if you attempt to enter an address that is on a truck-prohibited road. For an explanation of the difference between truck-prohibited and truck-restricted roads, see the PC*MILER *User's Guide*.

- Check **Time Estimate** and/or **Cost Estimate** to have BatchPro include time or cost estimates for trip legs in your output files. When calculating these estimates, BatchPro uses parameters set in the Options dialog box in PC*MILER. See the *PC*MILER User's Guide* for details.
- Check **Ferry Distances** to include ferry distances in mileage and cost calculations. When unchecked, routes will still use ferries but won't include ferry distance in the reported mileage and cost. Travel times are not affected.

2.4.9 Time Settings

For complete coverage of time-based routing in PC*MILER, including how traffic data is used, see the *PC*MILER User's Guide*.

To use time-based routing in BatchPro, either **Arrive** or **Depart** must be selected in the drop-down list under **Time Settings**. Routes will be calculated to arrive or depart by the day and time indicated in the other Time Settings drop-downs.

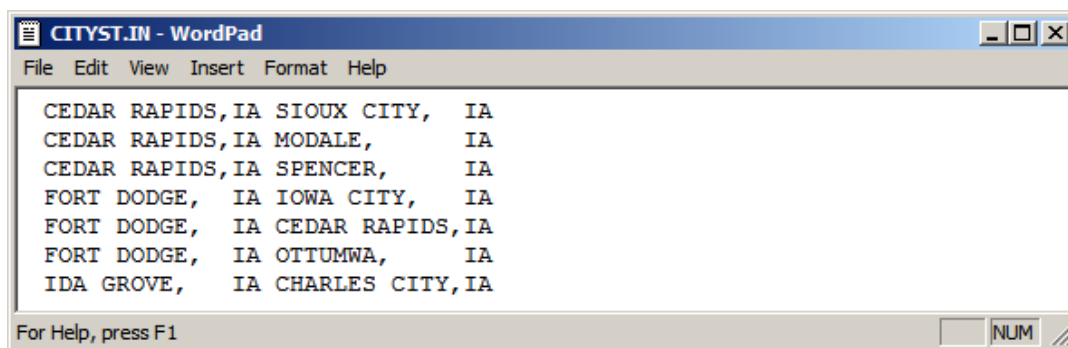
To set a target day and time, pick a day of the week in the drop-down list, and either use the up and down arrows or manually enter an arrival/departure time. To enter a time manually, click on the displayed time and use your keyboard to overwrite it, making sure that the AM/PM setting is correct.

To use PC*MILER traffic data for more precise travel times, check **Use Traffic Data**.

2.5 Reports (Output Files)

Three types of report files can be created from an input file. A fourth report file that includes toll costs can be generated if the PC*MILER/Tolls add-on module is installed. See the sample files below for an example of each file type. Note that place names in the report files will never be more than 40 characters long.

Report files are automatically placed in the same location as the input file.



Sample .IN File

Sections 2.5.1 - 2.5.4 below show examples of each type of report file that can be generated. The .IN file used for this example was processed using Practical routing.

NOTE: Because you will often create several report files for each input file, and report files are larger than input files, your available hard disk space must be approximately **three times** as large as the size of your input file.

2.5.1 .OUT File

The .OUT file follows the same format as your input file, with calculated **mileage** for each route segment placed to the right of the destination data. **Cost and time estimates** will also be included if these options are checked in the main window. The example below shows mileage, cost and time for each origin/destination pair.

CEDAR RAPIDS, IA	SIoux CITY, IA	266.6	323.14	4:15
CEDAR RAPIDS, IA	MODALE, IA	259.5	304.88	3:54
CEDAR RAPIDS, IA	SPENCER, IA	242.8	294.50	3:53
FORT DODGE, IA	IOWA CITY, IA	179.0	215.32	2:49
FORT DODGE, IA	CEDAR RAPIDS, IA	151.4	182.36	2:23
FORT DODGE, IA	OTTUMWA, IA	175.1	220.37	3:00
IDA GROVE, IA	CHARLES CITY, IA	192.7	239.09	3:13

Sample .OUT File

2.5.2 .MIL File

In the .MIL file, **mileage** are returned along with **cost and time estimates** (if selected in the main window). The .MIL file also translates places in postal code-only or city/state-only format into **postal code and city/state/county data**. The file shown below has been re-formatted to fit on the page.

NOTE: The space between columns in the sample output file below was minimized, the files you generate will have more white space and you may need to scroll to the right to see all the columns.

52401 Cedar Rapids, IA, Linn	51101 Sioux City, IA, Woodbury	266.6	323.14	4:15
52401 Cedar Rapids, IA, Linn	51556 Modale, IA, Harrison	259.5	304.88	3:54
52401 Cedar Rapids, IA, Linn	51301 Spencer, IA, Clay	242.8	294.50	3:53
50501 Fort Dodge, IA, Webster	52240 Iowa City, IA, Johnson	179.0	215.32	2:49
50501 Fort Dodge, IA, Webster	52401 Cedar Rapids, IA, Linn	151.4	182.36	2:23
50501 Fort Dodge, IA, Webster	52501 Ottumwa, IA, Wapello	175.1	220.37	3:00
51445 Ida Grove, IA, Ida	50616 Charles City, IA, Floyd	192.7	239.09	3:13

Sample .MIL File

2.5.3 .STA File

The .STA report file contains a mileage summary table, similar to PC*MILER's state distance summary report (see the PC*MILER *User's Guide*). The columns from left to right tell you the **total miles**, **toll miles**, **free miles**, and **ferry miles** traveled in each state, with totals at the bottom.

The sample .STA report below, for a trip from Cedar Rapids, IA to Pittsburgh, PA also includes a **toll cost** column on the far right (see section 2.5.4).

IL	170.5	5.2	165.2	0.0	3.00
IN	151.9	135.4	16.4	0.0	27.00
IA	1654.7	0.0	1654.7	0.0	0.00
OH	240.6	240.6	0.0	0.0	33.50
PA	48.4	28.2	20.2	0.0	15.00
Total	2266.0	409.4	1856.6	0.0	78.50

Sample .STA File

2.5.4 .TOL File

If the PC*MILER/Tolls module is installed with PC*MILER, BatchPro can generate a .TOL report that provides the toll cost for each origin/destination pair in the .IN file. Note that a toll cost total for the batch file is not provided in this report, but is provided in the .STA state report (see section 2.5.3 above).

Discount programs that affect toll calculations are specified in the Default Options dialog in PC*MILER (see the PC*MILER *User's Guide* that came with the product for more information). Toll amounts will be generated and discounts will be applied if **Tolls** is selected under “**Additional Options**” and **Discount Tolls** is selected under “**Toll Options**” in the BatchPro main window.

The .TOL output file shows toll costs for each origin/destination pair in the column to the right of the destination column.

NOTE: The space between the first two columns in the sample output file below was minimized, the files you generate will have more white space and you may need to scroll to the right to see all the columns.

52401 Cedar Rapids, IA, Linn	51101 Sioux City, IA, woodbury	0.00
52401 Cedar Rapids, IA, Linn	51556 Modale, IA, Harrison	0.00
52401 Cedar Rapids, IA, Linn	51301 Spencer, IA, Clay	0.00
50501 Fort Dodge, IA, Webster	52240 Iowa City, IA, Johnson	0.00
50501 Fort Dodge, IA, Webster	52401 Cedar Rapids, IA, Linn	0.00
50501 Fort Dodge, IA, Webster	52501 Ottumwa, IA, wapello	0.00
51445 Ida Grove, IA, Ida	50616 Charles City, IA, Floyd	0.00
50616 Charles City, IA, Floyd	15233 Pittsburgh, PA, Allegheny	77.45

Sample .TOL File

PC*MILER|BatchPro can be run from your PC's command line, without invoking the user interface. You can either type the command "**batchw32.exe**" at the prompt, or call it from another application or batch file. This feature is useful for scheduled runs, running a sequence of batch files, or for running BatchPro from another application – for example, executing an overnight batch run for your NT Scheduler.

To set up BatchPro to run in command-line mode, you must adjust your **pcmbatch.cfg** file so that the **CommandLine** option is set to 1 (0 is the default setting). The .cfg file is located by default in the same directory as the BatchPro executable (batchw32.exe).

[Run Mode]	
"CommandLine"= 1	1 = Yes 0 = No

When **CommandLine** is set to 1, the interactive screen is suppressed, and BatchPro will run using the settings in the .cfg file. Any of the message boxes that normally come up at the end of a batch are suppressed so that the program exits without additional user input.

By default, the BatchPro config file is named "**pcmbatch.cfg**" and is located in the same directory as the executable. However, you might want to set up and rename different .cfg files for running different sets of batch files. For example, if you wanted to run one series of batch files using certain settings, and another series using other settings, you could configure separate .cfg files for each series.

To run BatchPro using alternate .cfg files, after the batchw32.exe command, either 1) type a filename with the .cfg extension or 2) specify a full path and filename for the .cfg file. In the case of the first option, BatchPro will look for the file in the same directory as the executable. In the second case, BatchPro will look in the specified directory.

For examples:

- To run BatchPro from the command-line and have the interactive screen pop up, enter:
C:\> batchw32.exe

-
- To run BatchPro using a different .cfg file that resides in the same directory as the batchw32.exe file, enter:

C:\> batchw32.exe <space> foo.cfg

- To run BatchPro using a different .cfg file, located in a different directory, enter:

C:\> batchw32.exe <space> c:\my documents\foo.cfg

The geocoding confidence level in PC*MILER|BatchPro can be customized to optimize the performance of the application.

The term “geocoding confidence level” refers to how perfectly input locations must match at least one location in the PC*MILER database to be considered valid. The confidence level setting in BatchPro is normally set by default to match the level used by the PC*MILER user interface. However, this setting can now be changed in BatchPro’s configuration file to allow more flexibility in the matching process.

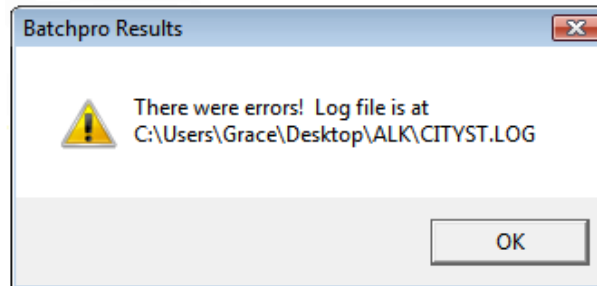
To change the confidence level, first find the **pcmbatch.cfg** file in your installation directory (if PC*MILER was installed in the default location, the file will be in C:\ALK Technologies\PCMILER29\BatchPro). Open this file in Notepad or another text editor. In the **[Route Options]** section, find this line:

“ExactnessLevel”=80

“80” is a percentage, meaning BatchPro must find an 80% match or better in the database to accept each place in the input file. To change this setting, change the number to be higher or lower, then save the pcmbatch.cfg file.

A higher percentage may increase the number of places in your input file that are rejected, but improve the overall accuracy of data matching.

If there were any errors in the processing of your input file, an error message like the one below will appear.



This message displays the path to the log file generated in response to the error. The log file is a text file that can be viewed using a text editor. It will describe the error that occurred, including the run start time, run end time, and options in effect.

```
LOGFILE
-----
Error   line 8           Dest no matches were found: PITBURGH, P,IA

--SUMMARY STATISTICS--
Chunk Size                : 5000
Started Processing         : Thu Apr 16 11:07:16 2010
Finished Processing       : Thu Apr 16 11:07:16 2010
Total Processing Time      :
Total number of O/D pairs  : 8
Number of O/D pairs processed : 8
Number of errors           : 1
Number of routes successfully run: 7
Number of pairs/second     : 1.#J
In File Format             : CitySt, 1, 15, 17, 31, 40

-----USER OPTIONS-----
Region                    - NA
Route Type                 - Practical
Reports                   - Out - State - Mileage - Toll
Hazmat                    - None
City/Zip Routing          - Use Local Streets
Additional Options        - Borders Open
Toll Options              - Discount Tolls
Distance Units            - Miles
Shadow Geocoding          - On
Trust Level               - 97
```

Sample Log File

As shown above, the log file will tell you which line(s) in the input file caused the error(s). The origin or destination name may not exist in the database, may be misspelled, or may be incorrectly formatted. In such cases, you can check the validity of the place name using PC*MILER. Other possible errors include the unavailability of the server and errors in calculation. See sections 5.1.1-5.1.3 for more on logging errors.

If you experience repeated errors and cannot find a solution in this manual or the *PC*MILER User's Guide*, contact ALK's Technical Support team (see section 1.3 for contact information).

5.1 Error Messages You May Encounter

Listed below are the error messages and prompts that you may encounter when processing batch files.

ERROR MESSAGE	EXPLANATION
'Route could not be run from NAME to NAME' '{Orig Dest} has no roads nearby: NAME' '{Orig Dest} invalid: NAME'	Route not found from {Orig Dest} to NAME.
'{Orig Dest} no matches were found: NAME'	Generated if an address, as part of a location structure, could not be geocoded.
'{Orig Dest} has no stop info: NAME' '{Orig Dest} has no city (or ZIP) tokens: NAME'	Users entered only a state without a city or ZIP code to accompany it.
'{Orig Dest} has bad postal code: NAME'	The data given as a postal code was not properly formatted and could not be parsed.
'{Orig Dest} has invalid state for region: NAME'	The given state is not a valid state within the current region.
'{Orig Dest} zip doesn't match input city,ST: NAME'	No entries were found where the given zip resides in the specified city.
'{Orig Dest} zip doesn't match input city,ST: NAME' '{Orig Dest} no address tokens: NAME' '{Orig Dest} no street number: NAME'	Returned if the supplied address did not contain a number, e.g. "Smith Ave." instead of "10 Smith Ave."
'{Orig Dest} number out of range: NAME'	Returned if the number received in XML exceeds the highest address number contained in the data for that street.
'{Orig Dest} number wrong parity: NAME'	Returned if address number is within the overall data range, but not in the odd or even range for this link.
'{Orig Dest} affix wrong parity: NAME' '{Orig Dest} name is misspelled: NAME'	Returned if the street was matched through soundex, but did not match the name on the data link, e.g. "Main" vs. "Maine"
'{Orig Dest} name has no matches: NAME'	Generic message when NAME not found, cause unknown.

The messages below are more cryptic, and are fatal to execution:

- Error! could not find .cfg file

BatchPro could not find the config file. If you are using the BatchPro Windows interface (interactive mode), there should be a file called “pcmbatch.cfg” in the same directory where BatchPro is installed. If BatchPro cannot find this file, the application will close after displaying the above message.

If you are in command-line mode when this message appears, you may have specified a different config file as the second argument on the command line. Either you specified a different name (e.g. “foo.cfg”), in which case BatchPro looks in the application installation directory; or you specified a full path and name (e.g. “c:\my documents\foo.cfg”), in which case BatchPro looks in that directory. As in interactive mode, if BatchPro cannot find the .cfg file, the application will close after displaying the above error message.

- Error loading DLLs

This error pops up if BatchPro cannot load the .dll files it needs to operate. This can happen either because some dll’s are missing, or they are in the wrong location. BatchPro looks in the directory set in **pcmserve.ini**. This .ini file may be in several different locations, but will most likely be found in c:\winnt. The pcmserve.ini file is installed along with any server products, including PC*MILER|Mapping and PC*MILER|Connect. If you get this message, you can either try setting the appropriate dll path in pcmserve.ini, or contact ALK’s Technical Support.

5.1.1 Routing Error Messages In the Log File

As mentioned previously, BatchPro automatically creates a log file along with other output files each time a batch file is run. You can use any text editor (for example, Notepad) to examine the log file.

A routing error in the log file reads as follows:

- Route could not be run from *(Origin to Destination)*

A routing error could appear for a number of different reasons, including data errors or a poor choice of origin/destination pairs (e.g. routing between Hawaii and Mexico). Example:

- Route could not be run from Honolulu, HI, Honolulu, 96820 to Camotepec, MX, Puebla

5.1.2 Geocoding Error Messages In the Log File

In the log file geocoding messages, the first word will either be “Orig“ or “Dest”, depending on where the error occurred. The colon will always be followed by the stop that created the error.

- Orig/Dest no exact matches were found:

While some matches were found, none were exact.

- Orig/Dest no matches were found:

No matches were found at all.

- Orig/Dest is invalid:

Invalid origin or destination.

For PC*MILER|Streets only:

- Orig/Dest has invalid address string:

- Orig/Dest has bad address match: No matches could be found for the street address.

5.1.3 Keeping Output Files Free of Error Messages

Normally, BatchPro displays any errors that occur during processing in the output files that are generated, as in the example below:

00210	08540	Error on line 1: Orig no matches were found: 00210
00210	08540	Error on line 2: Orig no matches were found: 00210
00211	08540	Error on line 3: Orig no matches were found: 00211
00212	08540	Error on line 4: Orig no matches were found: 00212
00213	08540	Error on line 5: Orig no matches were found: 00213
00214	08540	Error on line 6: Orig no matches were found: 00214
00215	08540	Error on line 7: Orig no matches were found: 00215
00501	08540	106.3
00544	08540	107.0
01001	08540	192.5
01002	08540	214.1
01003	08540	Error on line 12: Orig no matches were found: 01003
01004	08540	Error on line 13: Orig no matches were found: 01004
01005	08540	235.3
01007	08540	212.1
01008	08540	213.1
01009	08540	209.4
01010	08540	213.2
01011	08540	219.6
01012	08540	224.3
01013	08540	196.3
01014	08540	Error on line 22: Orig no matches were found: 01014
01020	08540	196.6
01021	08540	Error on line 24: Orig no matches were found: 01021
01022	08540	199.4
01026	08540	230.5
01027	08540	206.6
01028	08540	192.1
01029	08540	192.4
01030	08540	191.5
01031	08540	223.1
01032	08540	223.4
01033	08540	208.7
01034	08540	186.1
01035	08540	212.0

To have errors recorded only in BatchPro's log file, do the following steps:

- 1) In Windows Explorer, navigate to the BatchPro folder within the PC*MILER installation (e.g. C:\ALK Technologies\PCMILER29\BatchPro).
- 2) Open the **pcmbatch.cfg** file in Notepad or another text editor.
- 3) Scroll to the bottom, to the [Run Mode] section.
- 4) Change "ErrorsInLogOnly" to equal "1":

"ErrorsInLogOnly"=1