



Etasoft – Mini Translator version 3.x

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Main website <http://www.etasoft.com>
Product website <http://www.xtranslator.com>

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Purpose

Mini Translator is a set of tools designed to produce human readable formats out of EDI data files. It is mini translator, EDI standards database and report generator rolled into one.

Typical translators are designed to produce or consume EDI files in order to make other computer systems talk to each other. Mini Translator is designed to take an EDI file and produce one of easier to read formats like CSV. It uses slim down version of database with EDI standards to find names and meaning of most of EDI constants.

Supported EDI standards include EDI X12 4010, 4020, 4030, 4040, 4050, 4060, 5010, 5020 and 5030. Product supports all HIPAA message types. Other EDI standards such as EDI X12 6010 have also been tested and should work as well.

Mini Translator is simplified version of Extreme Translator product. It is designed to produce basic EDI data outputs without need for you to learn how to create translation maps for them. Mini Translator performs auto-map internally and creates translation map for you. However this simplification means that number of features available in Extreme Translator are not available in Mini Translator. If you find Mini Translator lacking please take a look at Extreme Translator product.

Requirements

<i>Minimum Requirements</i>	
Software	Windows 2000/XP/Vista/Server 2003/7
Hardware	Pentium 1GHz, RAM 256Mbt
<i>Recommended</i>	
Software	Windows XP Pro
Hardware	Pentium 1.5GHz, RAM 512Mbt

Package Details

Package comes as setup program for Windows based personal computers. Software product does not install any separate runtimes or systems and does not require them to be preinstalled. Example: software does not use .NET or Java runtimes and does not need them preinstalled.

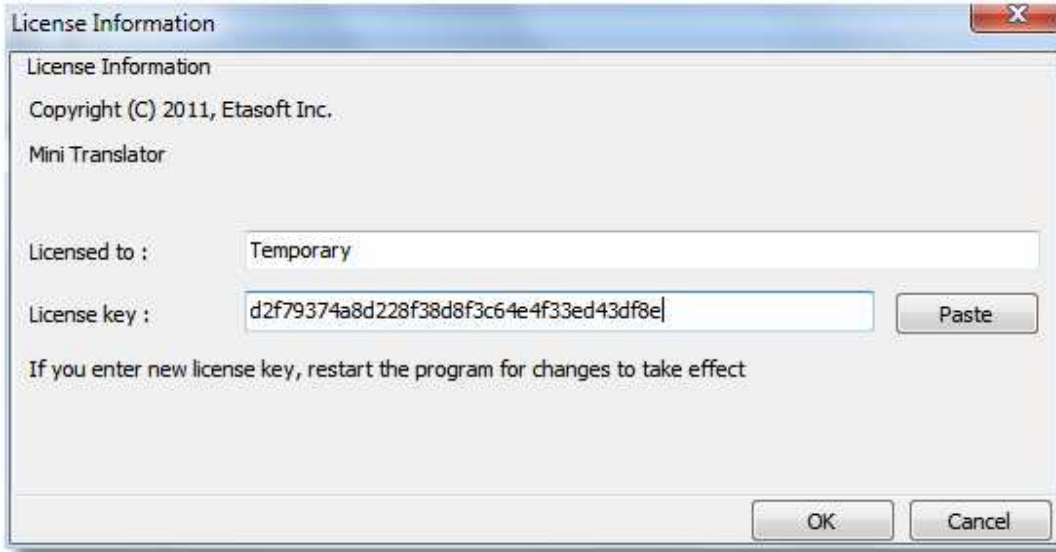
We recommend to always use setup program to install product on new computer.

Once installed product creates following important files:

1. Mini.exe – main program.
2. MiniCmd.exe – command line batch type translation runner.
3. Mini.pdf – Users Manual documentation.

Licensing

Default package installation comes as time limited trial evaluation license. After fixed number of days starting from the day of the first use, trial evaluation license will expire and most of software features will become disabled. If you like the product and purchase it, you will receive permanent license key. This new key must be entered in License dialog:



License key should be entered via Help->License menu in Mini Translator main screen. Both "License To" and "License key" fields are required.

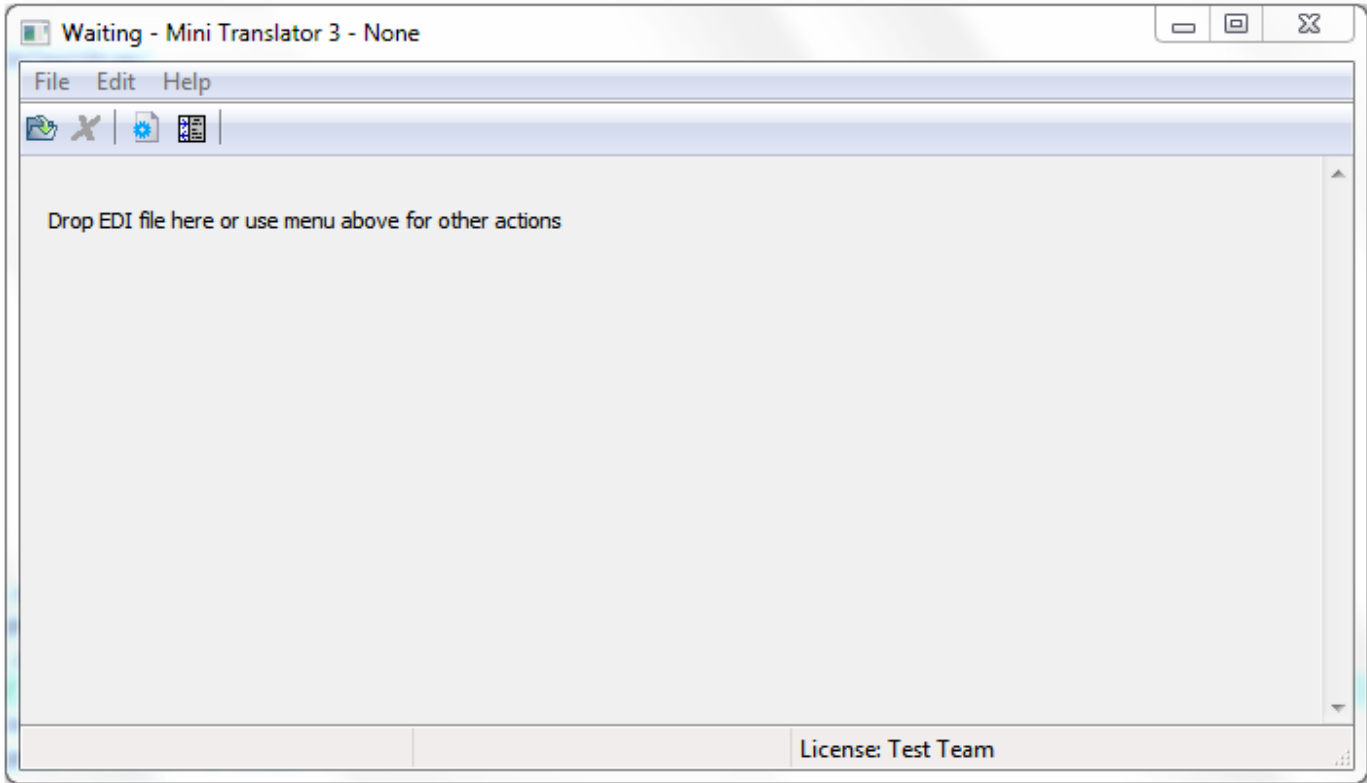
If you let trial version to expire this will eventually stop software from processing data. Once you decide to purchase the product, you will receive new permanent license key you can enter in the License screen. This new key will unlock the product without a need to reinstall it.

If you like the product and decide to purchase it, you will receive new permanent license key that will never expire. Simply enter or copy and paste new license key in Help->License screen, and restart the program. Same permanent license key can be used to run translations via command line. However you need special developer license to integrate translator runtime into your programs and use Developer SDK.

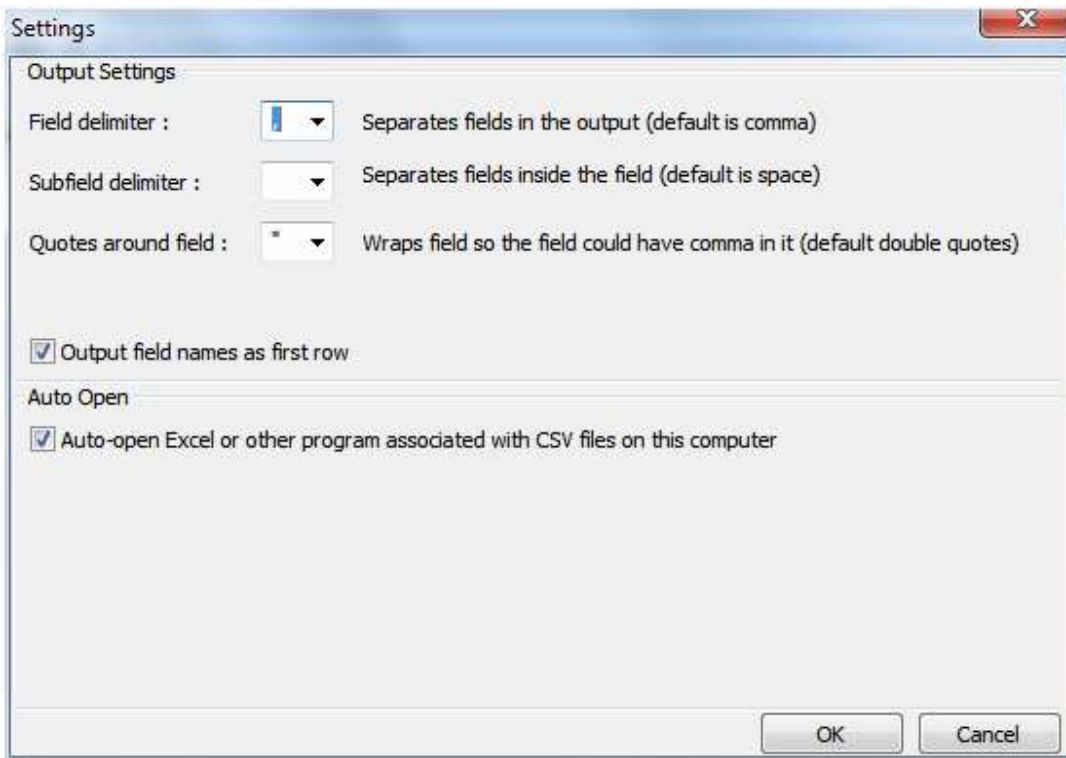
Main Program

You can preview and create output EDI files using main program. Use "File->Open And Translate" menu or Open toolbar button to open EDI file.

Mini Translator creates output file into the same directory as input file but sets output file extension to ".csv" and adds "_out" to the end of file name. Example: if your input file is called "my271.edi" your output file name will be "my271_out.csv".



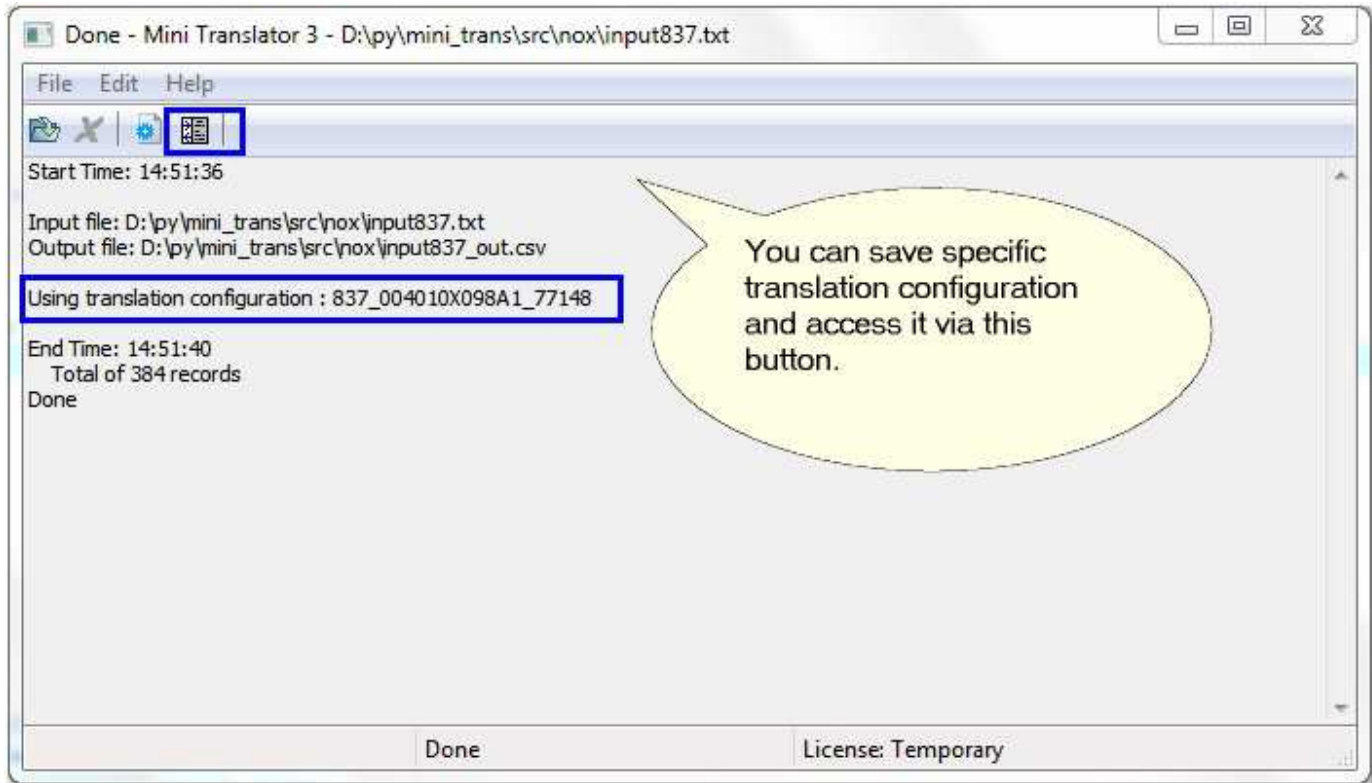
There is main Mini Translator screen. You can simply drop your EDI files on it.



There are number of options available when opening EDI files. Default options are setup so file would easily open in Microsoft Excel or other program that can display typical CSV files.

Translation Configuration

You can save translation configuration and modify it via Edit Translation Configuration toolbar or menu option. If you do not click Edit Translation Configuration after you run specific EDI X12 file for the first time, then translation configuration is left unsaved.



At the start of processing translator reads EDI transaction number, standard information and sender Id from ISA, GS and ST segments of the EDI X12 file. Combination of those 3 fields forms message "identity". All EDI X12 files with same identity have the same features. Therefore translation configurations are saved based on EDI X12 file identity (based on combination of transaction_standard_senderId).

So you may have two EDI X12 837 files from the same sender but they would be based on different standards therefore they will have different "identity" and different translation configurations. Obviously you may have 270s, 834s and 837s from the same sender and based on the same standard but since they are different transactions they will have different translation configurations as well.

Translation configuration saves field names, flag for disabled fields and "Use Previous If Empty" flag. You can change all of those options.

If "Use Previous If Empty" flag is True it tells translator to repeat value of the header information from previous row of the flat file into current row. This is mostly used for header fields that contain information that has to be repeated for each new row of the flat file.

When translator creates initial translation configuration for the first time it performs following optimization steps:

1. "Use Previous If Empty" flag is set to True on header fields.
2. Fields that do not have any data in them by default set as disabled (unchecked).
3. Most qualifier and identifier fields by default set to disabled.
4. Field names set to names defined in small EDI X12 standards database that comes with translator.

Edit Translation Configuration

Translation Configuration

Translation : 837_004010X098A1_77148 [Delete This] [Delete All]

Fields :

- Information Source, Subscriber, Dependent Reference Identification
- Information Source, Subscriber, Dependent Date
- Information Source, Subscriber, Dependent Time
- Functional Category Reference Identification
- Submitter Name Last or Organization Name
- Submitter Name First
- Submitter Name Middle
- Submitter Name Prefix
- Submitter Name Suffix
- Submitter Identification Code
- Submitter Period Detail
- Submitter Communication Number
- Receiver Name Last or Organization Name
- Receiver Name First
- Receiver Name Middle
- Receiver Name Prefix
- Receiver Name Suffix
- Receiver Identification Code
- Information Source Hierarchical ID Number
- Information Source Hierarchical Parent ID Number
- Billing Provider Name Last or Organization Name
- Billing Provider Name First
- Billing Provider Name Middle
- Billing Provider Name Prefix
- Billing Provider Name Suffix
- Billing Provider Identification Code
- Billing Provider Address Information
- Billing Provider City Name
- Billing Provider State or Province Code
- Billing Provider Postal Code
- Medicaid Provider Number Reference Identification
- Pay-to Provider Name Last or Organization Name
- Pay-to Provider Name First
- Pay-to Provider Name Middle
- Pay-to Provider Name Prefix

Field Properties :

General	
Id	BHT_0019_2
Name	Information Source, Subscriber, I
Values	
Use Previous If Empty	True

Double click field list above to change field's name

[Check All] [Uncheck All] [Close]

You can turn-off specific fields you do not want.

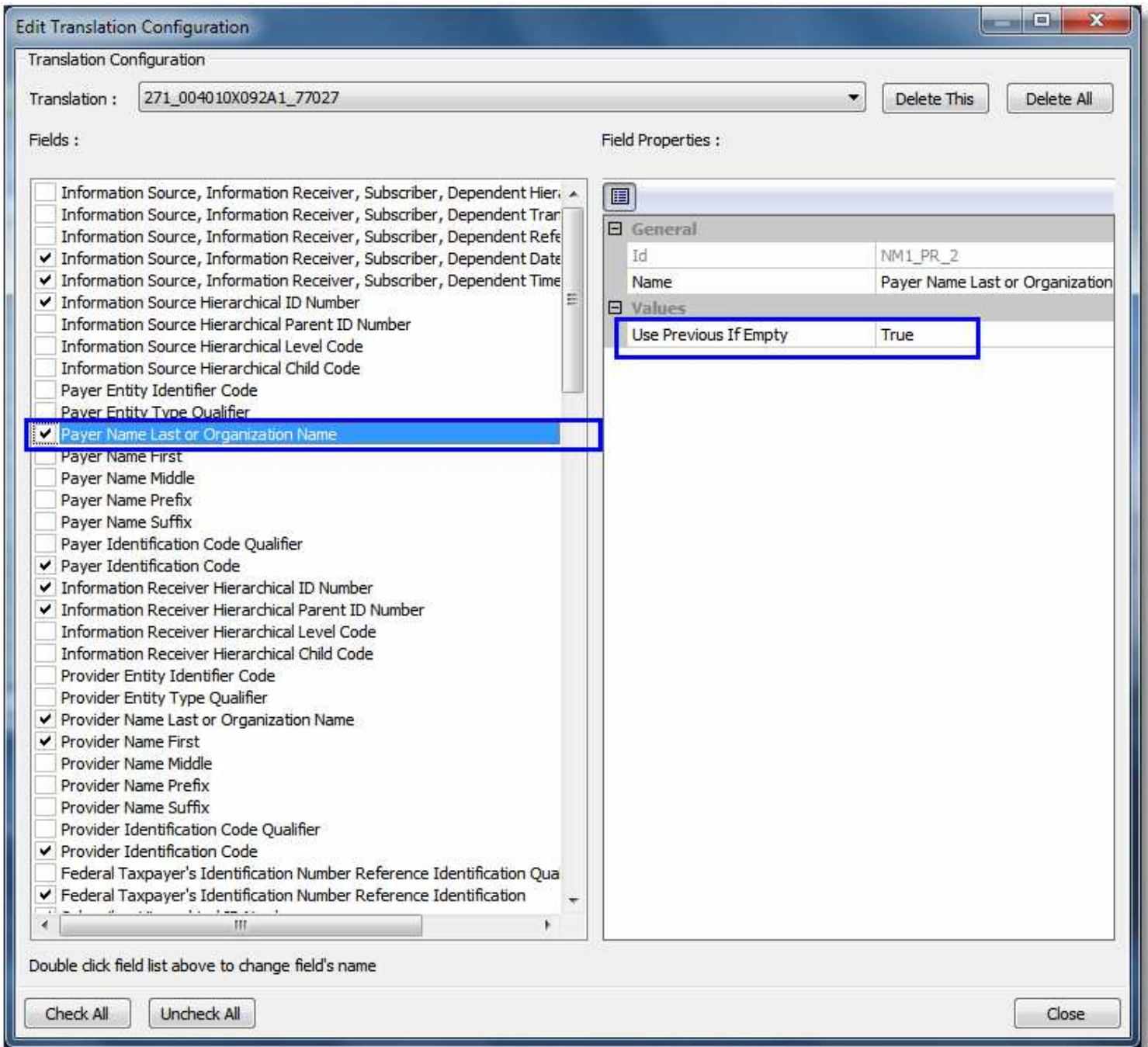
You can also change field names.

After you open Edit Translation Configuration screen Mini Translator saves that translation configuration and uses it for future translations. "Use Previous If Empty" for this field is set to True, that means translator will repeat this fields value on every row of CSV if there is no new value for this particular field. You can change "Use Previous If Empty" to False if you do not want that value repeated on every row.

	A	B	C	D	E	F
1	Information	Information	Information	Payer Name Last or Organization Name	Payer Ident	Inform
2	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
3	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
4	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
5	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
6	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
7	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
8	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
9	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
10	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
11	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
12	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
13	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
14	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
15	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
16	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	
17	20110811	1536	1	STATE OF FLORIDA MEDICAID	77027	

This field has also “Use Previous If Empty” set to True and it repeats its value for every row of CSV file. But in EDI file there is only one value for “STATE OF FLORIDA MEDICAID”.

Initially when translation configuration is created translator tries to make intelligent guess what fields should have they values repeated and have “Use Previous If Empty” set to True. Translator performs EDI loop analysis and then sets “Use Previous If Empty” to True on fields that are mostly header fields. You can change all of those flags in translation configuration.



There is where you set "Use Previous If Empty" for this field to True.

Translation Configuration

Translation : 834_999999X999X9_999999999 [Delete This] [Delete All]

Fields :

- Original Transaction Type Code
- Original Action Code
- Master Policy Number Reference Identification Qualifier
- Master Policy Number Reference Identification
- Plan Sponsor Entity Identifier Code
- Plan Sponsor Entity Identifier
- Plan Sponsor Entity Type Code
- Broker/Contractor Reference Identification Qualifier
- Yes Yes/No
- Yes Individual Relationship Code
- Yes Maintenance Type Code
- Yes Maintenance Reason Code
- Yes Benefit Status Code
- Yes Medicare Status Code
- Yes Consolidated Omnibus Budget Reconciliation Act (COBRA) Qualifying
- Yes Employment Status Code
- Client Number Reference Identification Qualifier
- Client Number Reference Identification
- Group or Policy Number Reference Identification Qualifier
- Group or Policy Number Reference Identification
- Eligibility Begin Date/Time Qualifier
- Eligibility Begin Date Time Period Format Qualifier
- Eligibility Begin Date Time Period
- Insured or Subscriber Entity Identifier Code
- Insured or Subscriber Entity Type Qualifier

Field Properties :

General	
Id	DTP_356_2
Name	Eligibility Begin Date Time Period
Values	
Use Previous If Empty	False

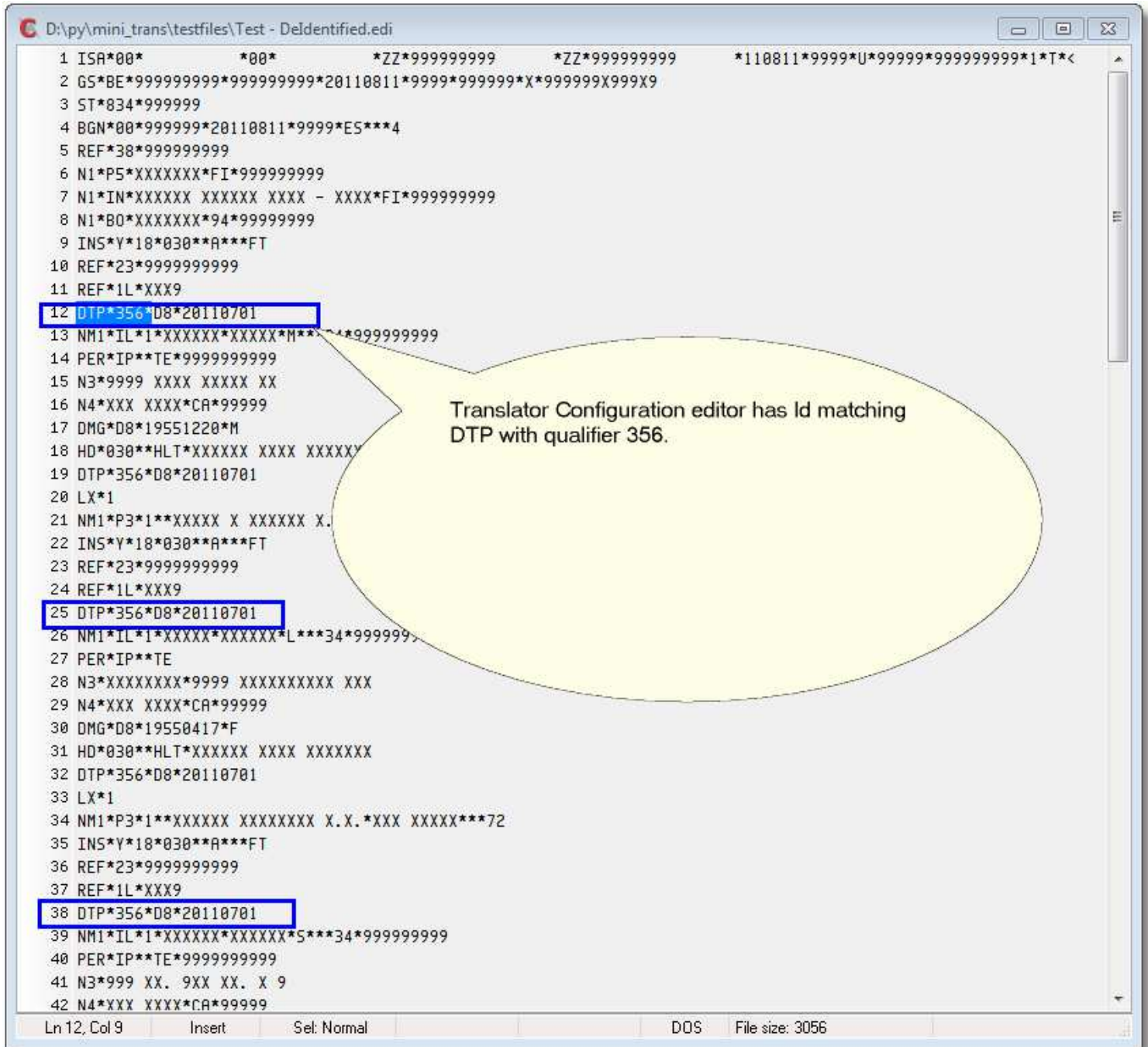
Double click field list above to change field's name

[Check All] [Uncheck All] [Close]

This means that translator will look for EDI segment DTP with qualifier 356 and once it finds it, translator will take element #2 from DTP_356 and place into this output field.

Translator uses segments with qualifiers to find specific data in the file. Then it saves that search information into Id property stored in the translation configuration. You can see Id property in the list just below "General".

Now look at the actual EDI X12 sample file below to see how this information looks inside EDI X12 file.



Segment is DTP and segment qualifier is 356. Look at the previous screenshot and notice how "Id" property contains DTP*356.

Processing Modes

There are two processing modes:

1. "Free run" mode. In this mode translator is allowed to just take any EDI file and use its own discretion on output. If you simply run Mini Translator and do NOT use Translation Configuration then it detects fields and decides which ones to show/not show, etc. Therefore on each new file set of fields may differ. Because you do not use Translation Configuration each file is new file for the translator. It performs field discovery on every run.
2. "Frozen fields" mode.

When you process file from Trading Partner first time, make sure to open Translation Configuration. Then it will "freeze" columns for that Trading Partner.

Each Trading Partner gets different Translation Configuration.

Once you open Translation Configuration and click OK, number of columns is fixed for that particular Trading Partner. You can enable/disable columns but they location will not change on every execution unless you change it.

Batch Command Line Processing

You can run mini translator as command line batch job. But first you need to execute main Mini Translator GUI at least once. It will register license key and EDI standards database.

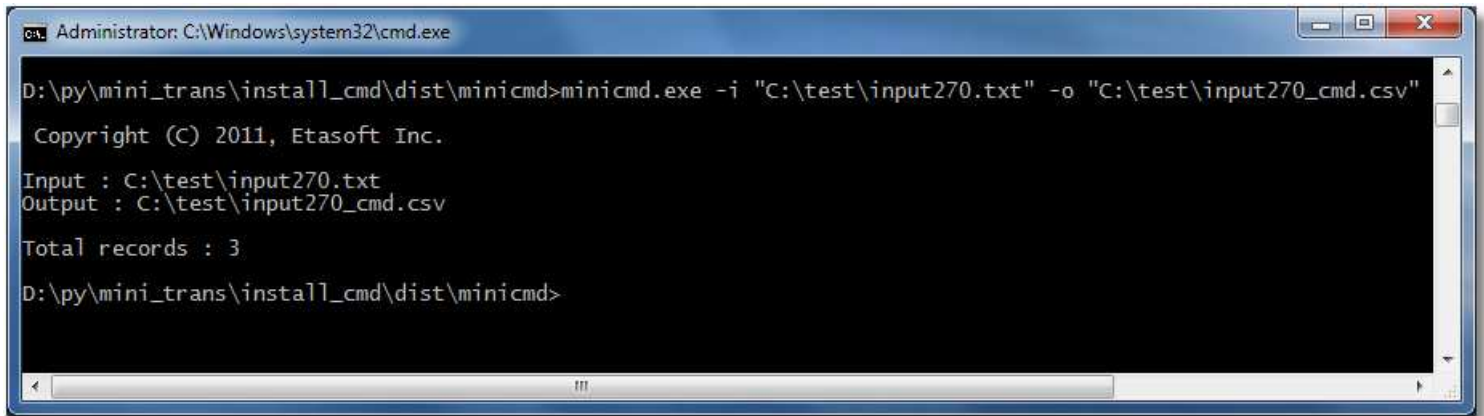
```
"C:\full_path_to_executable\minicmd.exe" -i "C:\test\input270.txt" -o "C:\test\input270_cmd.csv"
```

Here "-i" followed by space and input file name in double quotes is input file.

"-o" followed by space and output file name in double quotes is output file.

If you do not provide "-o" parameter then translator will create output file name based on input file name with extension ".out".

Other options such as field separators, use of quotes, etc. are by default taken from settings set via main Mini Translator GUI. Command line runner returns 0 if processing run without errors. Non-zero exit code indicates error.



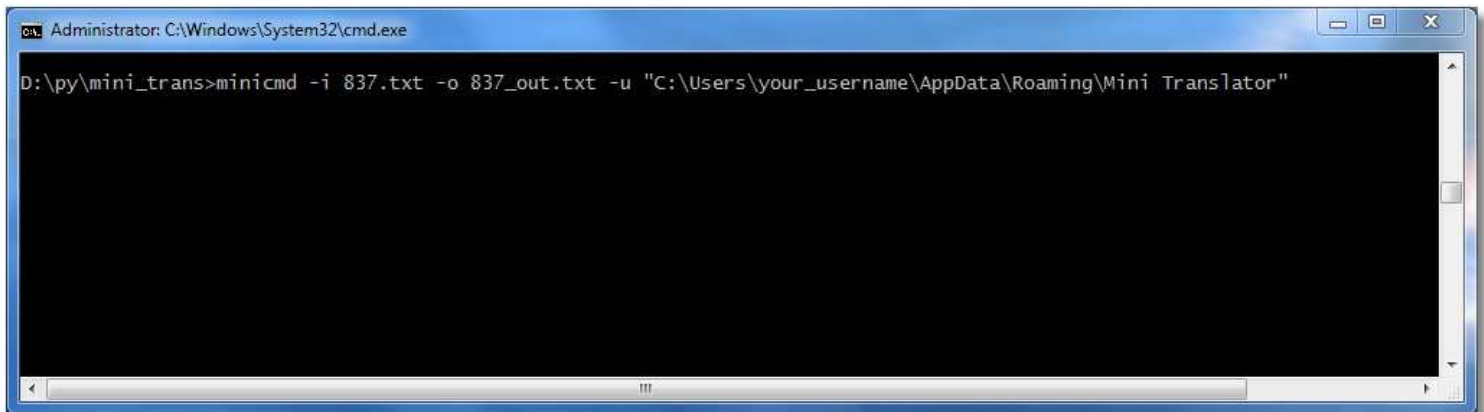
```
Administrator: C:\Windows\system32\cmd.exe
D:\py\mini_trans\install_cmd\dist\minicmd>minicmd.exe -i "C:\test\input270.txt" -o "C:\test\input270_cmd.csv"
Copyright (C) 2011, Etasoft Inc.
Input : C:\test\input270.txt
Output : C:\test\input270_cmd.csv
Total records : 3
D:\py\mini_trans\install_cmd\dist\minicmd>
```

There is command line execution in action.

On some installations command line runner can not find settings set via main Mini Translator GUI and will give you "Not licensed" error. In that case you need to pass path where settings are into command line runner using -u parameter. Parameter -u takes directory where Mini Translator has EDI Standards database and "settings.json" files installed. You can find this directory on most computers by simply typing

```
echo %AppData%
```

in the command line. Environment variable %AppData% + subfolder "Mini Translator" should give you string you need to type for parameter -u.



```
Administrator: C:\Windows\System32\cmd.exe
D:\py\mini_trans>minicmd -i 837.txt -o 837_out.txt -u "C:\Users\your_username\AppData\Roaming\Mini Translator"
```

Pass command line -u option that points to settings set via main Mini Translator GUI. This is only required if command line runner can not find settings set via Mini Translator GUI.

Mini Translator command line runner returns 0 (zero) if there are no errors during processing. Any other return value indicates error.

You can also process all files in specific directory. This is done using wildcard patterns in input file name.

```
"C:\full_path_to_executable\minicmd.exe" -i "C:\test\*.txt"
```

Following command line will process all the files in directory C:\test that have extension "*.txt". Do not supply output file name as translator will create output file names based on input file names it finds using wildcard pattern.

What Are Invalid EDI Files?

Once you open EDI file in some text editor like Notepad, it looks cryptic. However all valid EDI X12 files have same properties:

1. They all start with three letters: "ISA"
2. After 103 characters there is word "GS". Sometimes "GS" is on the second line. If "GS" is on the second line then there might be only 102 characters between "ISA" and "GS".

Mini Translator reads and breaks down EDI files using these two points above. Most common scenarios why Mini Translator might not be able to process the file:

1. That is not an EDI X12 file. Period. It is flat file, XML or scanned print image form or something else but EDI file.
2. If you copy and paste EDI file from Internet Browser window in most cases resulting EDI file will not be valid anymore. This is due to how spaces are displayed in the Browsers. Instead of 103 characters between ISA and GS you might end up having much less.
3. Usually EDI files are sent over secure connections using encryption/decryption communications. Sometimes not just communications but EDI files are encrypted themselves. Encryption leaves ISA/GS part valid but all segments in the file unreadable. Unless EDI file is decrypted Mini Translator will not be able to read it correctly.
4. Some EDI files come from mainframe computer systems. Occasionally they are formatted into columns of 80 characters long. Extra carriage return and line feed characters break segments into multiple lines making EDI file invalid. Those files can not be processed.
5. Rarely EDI software communication packages combine multiple EDI messages of various types into one file. There are two variations of this combination:
 - a) Example: 810 invoices and 997 acknowledgements with the same separators in one file. This is valid EDI file however output of Mini Translator might not look right. Because Mini Translator will try to flatten EDI loops and encounter few loops repeating independent of each other (as per example above: 810 invoices will repeat separately from 997 loops). It is like trying to combine two spreadsheets that have no common fields; at the end combined spreadsheet will have mix of lines that do not tie up.
 - b) Example: 810 invoices and 997 acknowledgements with the different separators in one file. This is not possible to process. Mini Translator detects separators at the start of the EDI file. If separators change somewhere in the middle of the file Mini Translator will continue processing the file using old separators found at the file start. Scenario when various EDI messages are mixed in one file with different separators is very rare but we mention it here to complete possible list of files that can not be processed.

Looping and Processing Details

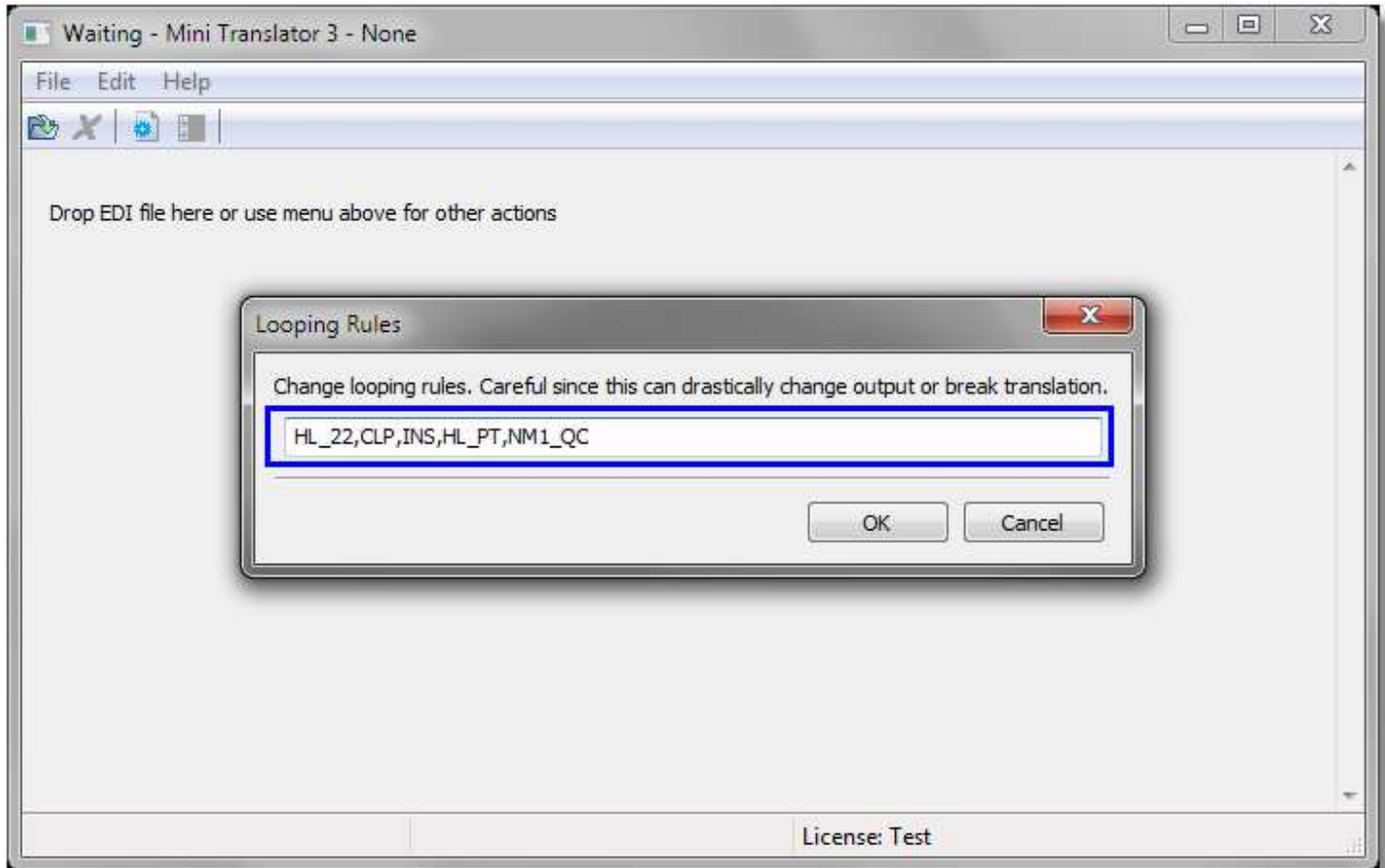
Mini Translator uses compact database with EDI information to look up number of codes and values you see in a typical EDI file. This allows creation of the output that contains human readable text instead of 2-3 letter codes.

Mini Translator also tries to create flat structure out of looping EDI hierarchies. As a result EDI header fields repeat their values for every new line of the output file. New line in the output is created when nested EDI loop repeats.

Creating flat structure out of looping EDI messages with many nested hierarchical levels is not a trivial task. Flat structure is created by repeating header and trailer field values while creating new values of detail fields on each new output line. Mini Translator performs looping structure analysis as first processing step. Result of this analysis is how many output lines or columns are created in the output file.

Change looping

Starting with version 3.130 you can change how translator handles looping. It adds simple dialog screen that allows you to enter looping rules.



Current default looping rules are:
HL_22,CLP,INS,HL_PT,NM1_QC

What does it mean? It means that for example if translator encounters HL_22 segment in EDI file it has to create new row in CSV. Default rules setup to produce most common outputs for various EDI files. But you can alter them. This is very powerful feature that gives you additional CSV output customization.

Each rule is separated by comma.

835 example:

SVC ,HL_22,CLP,INS,HL_PT,NM1_QC

Notice SVC rule added. This will force translator to create new CSV row for every SVC (service line segment in 835).

837 example:

SV1,SV2,HL_22,CLP,INS,HL_PT,NM1_QC

Notice SV1,SV2 added. This will force translator to create new CSV row for every service line in 837.

You can also try:

LX,HL_22,CLP,INS,HL_PT,NM1_QC

271 example:

NM1_IL,HL_22,CLP,INS,HL_PT,NM1_QC

Notice NM1_IL added before HL_22. In some 271s you might want to get more rows in CSV output. This should do it.

Downside is that you need to delete all your current translation configurations before you alter these looping rules. Use "Edit Translation Configuration" and "Delete All". Then go to Edit->"Looping Rules".

Some rule changes break translation and produce formats with fields shifted into incorrect rows. Do not make changes to the looping rules unless you have to. Default rules have been tested and work for majority of EDI formats. Therefore it is best to leave default rules unless you really need translator output changed.

Results

After successful execution Mini Translator produces files in number of formats. Some formats like CSV can be open in popular spreadsheet programs such as Microsoft Excel. You might need to move and **resize spreadsheet columns to see all the data properly**.

Keep in mind that spreadsheet programs have certain limitations on how many columns and rows they can display or how big of spreadsheets they can handle. Some have hard set limits of no more than 256 columns and no more than 16384 rows.

If your EDI file contains hundred thousand segments you might not be able to open it in a typical spreadsheet program. It is limitation of spreadsheet program and not of Mini Translator.

Performance

Mini Translator reads and parses EDI files in computer memory. That puts certain limits on how big input EDI files it can process. Also since output report files are more verbose than input EDI files total output size could be 7-10 times greater than input size. Example: if your input EDI file is 4Mbt your CSV output file might be around 30Mbt. This is due to the fact that flat files contain many repeating values.

Developer SDK

Look under DeveloperSDK subfolder below Mini Translator installation main folder.

Technical Support

Please contact technical support if you have any questions or concerns. Contact information is listed on the product and company websites.