

CA 2E

Translator User Guide

r8.5



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Chapter 1: Introducing CA 2E Translator

CA 2E Translator translates all of the text in an application from one language to another (French to English, for example). CA 2E Translator translates **only** the text that is visible to an application end user such as screen text and messages, for example. There is always much more text in the design of an application that does **not** need to be translated, and CA 2E Translator separates this text from the text that does need to be translated.

What Is Translated?

CA 2E Translator translates four types of text in an application:

- Screen and report text (known as *literals*)
- User message text
- Conditional text
- Help text

The following illustration shows examples of each kind of text (except help text). Customer Code is a screen literal, Y=Yes and N=No are conditional text, and the Warning text at the bottom of the screen is a user message.

TRN520R	11/05/04 5:14:13
Print Customer	
Customer Code. _____	
Print all details? . . . _____ Y=Yes N=No	
ENTER=Continue F3=Exit F12=Previous *** Warning - this file is not found! ***	

Using the Screens

The four types of text mentioned in the previous section are translated separately by the CA 2E Translator; this section describes the common features of each type of text and how to navigate the CA 2E Translator product screens.

From the main menu, take each option in turn. Behind each option is an option named Translate Dictionary Entries; take each of these in turn (sequence is not important).

First, you will be prompted to select a *target environment*. Normally, this means language (for example, French or German). However, because it is sometimes necessary to have two different translations for the same language (for example, perhaps the Paris office and the Bordeaux office use different terminology), we use the term target environment.

You will see a list of entries for the target environment you have selected. Initially they will display in the original language. After the CA 2E Translator translates some of the entries, you will begin to see a mixture of original and translated text, as shown in the following illustration, where the first entry has been translated and the others remain in the original language.

In the following illustration, the first blank line on the left side of the screen is the positioner field; the second blank line represents the updated flag (Y=Yes, N=No). The Updated flag shows if an entry has been updated, (that is, if the current text is different from the original text). If you change an entry back to the original text, the Updated flag will revert to N=No.

TRN510R DISPLAY	11/05/04 5:14:34
YTRNDDA Ytrndta	Translate User Messages
Target FRN French	

? Msg ID Text	
Sts 2nd?	
USR0001 Client pas trouve	
Y	
USR0001 Customer already exists	
N	
USR0001 Order value exceeds credit limit	
N Y	
F3=Exit F8=Position F9=Toggle F10=Change All F12=Previous	

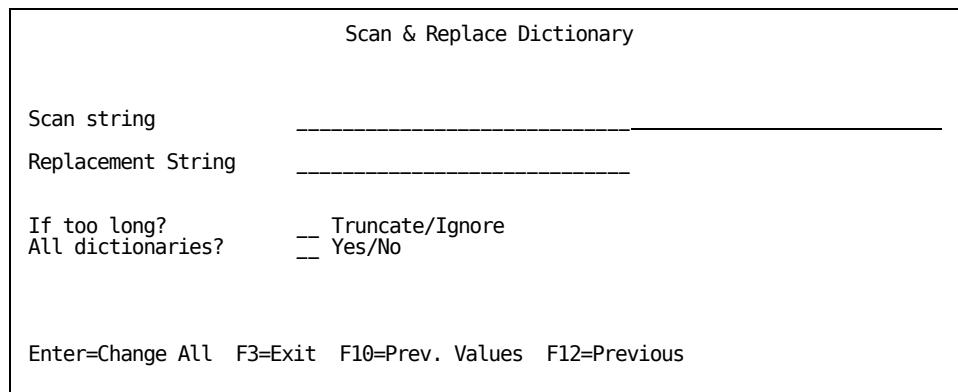
The F9 key toggles the screen between the display of original text and translated text. (When displaying original text, the screen is not capable of receiving input.)

Note: Pressing the F9 key reloads the screen and uses the positioner field for positioning. Therefore, if you have paged down several times, then press F9, the display will start again with the first record. To position at another point, you must enter the required message ID in the positioner field.

The previous illustration shows the selected target environment in the upper-right corner (target FRN French). You can press the F3 key to exit to the menu, or press the F12 key to return to the previous screen.

Working with the Scan & Replace Dictionary

The F10 key displays the Scan & Replace Dictionary screen, as shown in the following illustration. This screen allows you to scan the entire dictionary for a particular string, then replace that string with a new string.



The image shows a terminal window titled "Scan & Replace Dictionary". It contains the following fields:

- Scan string: A text input field.
- Replacement String: A text input field.
- If too long?
All dictionaries?: A two-line text input field with two options: "Truncate/Ignore" and "Yes/No".

At the bottom of the window, there is a status line with the following text: "Enter=Change All F3=Exit F10=Prev. Values F12=Previous".

- The Truncate/Ignore flag controls what happens if the replacement string is longer than the scan string, and this makes the result after substitution longer than the maximum allowed.
Either the result is truncated and made to fit into the field, or the entry is ignored and not changed (the default is to truncate).
- The All dictionaries flag controls whether all dictionaries (for example, panels, user messages, and conditions) are scanned or just the current dictionary.

- The F10 key displays the previous scan values if this function has been used previously during the current session.
If the scan string occurs several times in the entry, only the first occurrence will be replaced. To make multiple scans, press the F10 key to recall the values, then scan again; the Update flag is set (or re-set) appropriately.

Note: Unlike the Change all facility for duplicate literals and conditions, this function **does** change entries that have been updated previously.

Working with Panels

The Work With Panels screen is displayed when translating screen and print files, as shown in the following illustration.

```

TRN151R DISPLAY                               04/30/04 16:45:02
YTRNNDTA Ytrndta          Work With Panels
Device File Description          Held
1=Translate in Context 2=Translate by List 3=Hold 6=Release
7=Work with Formats 9=Print Literals

? Device File Description          Held
- RSABEFR      Edit Customer          Edit file      N
- RSBDFRZ      Display Orders        Display file    Y
- RSBOPFRX     Print Customer        Print File     N

F3=Exit F10=Translate by Text F12=Previous

```

There are several options from the Work With Panels screen; these options are described in the following sections.

Individual panels can be flagged as held. You can use this indicator to show panels are finished, and by using the held selector field you can display only held or released panels.

Note: The Held flag does not control any processing, for example, it does not prevent you from making additional changes.

Option 1: Translate in Context

Option 1 displays a sample screen of the panel with all literals in their correct positions. The user positions the cursor on a literal and presses Enter; the literal is then capable of input and can be overtyped. The user presses Enter again to update the entry in the target message file.

If the text in the subject literal has already been translated elsewhere, a Select Previous window displays all such translations. One of these may be selected instead; if none of the existing translations is suitable, the user can press the F12 key to return and translate this literal individually.

If a literal has been translated before, but the original text has since been changed, the previous text will have been archived. If found, this archived text will be displayed as the first entry in the Select Previous window.

If other occurrences of the original text are found in the subject literal, another window advises of this and provides a facility to update each of them with the current translated text.

Where literals overlap, a “+” symbol is shown in front of the first entry, indicating the second one. To translate the second entry, you use option 2 to display the List screen, as described in the next section.

Scroll Left/Right and Page Up/Down are provided for panels wider or longer than the standard 24 x 80 screen (for example, 132 column reports).

Option 2: Translate by List

Option 2 displays all of the literals for a panel in a list for translation. The Select Previous and Translate All facilities described in the previous section are both available on this panel. If an entry has already been translated, this is shown by the sgid_maabbcc text being highlighted (or highlighted in blue instead of the normal green).

Option 3: Hold

The Hold option flags a panel and marks it as held.

Option 6: Release

The Release option releases a panel.

Option 7: Work With Formats

The Work With Formats allows you to translate by format. All of the formats in a screen are listed, enabling options 1 and 2 to be used for individual formats (this is particularly useful for hand-coded panels).

Option 9: Print Literals

The Print Literals option prints all of the entries for a panel, showing both the original and translated text.

F10: Translate by Text

The F10 key provides the translation of literals in text sequence, allowing the user to see where a piece of text is used, and to visit that format. In addition, the Translate by Text screen denotes whether literals have been changed via a flag, and allows selection via this flag. The use of a flag provides a way to ensure that all literals have been translated or to see only new or changed panels.

The F9 key toggles the display between original and target text; this key can be used on all text translation screens.

Note: This panel displays entries in text sequence of the original text, **not** in the sequence of the translated text.

User Messages

User messages can have a maximum length of 132 characters; each line of a user message is 66 characters. Some entries may have additional second-level text indicated by a flag against that entry, and the user is automatically invited to edit that text after pressing Enter. Second-level text can also be edited using option 2 from the main screen.

An alternative way to position to a particular entry on this screen is to move the cursor onto the required entry number and press the F8 key. The value is moved into the heading field, but unlike the Conditions panel, you must reload the screen yourself by pressing the F5 key to refresh the screen or the F9 key to toggle the display between original text and translated text.

Conditions

Entries with an asterisk symbol (*) are *condition list headers*. In the following illustration, the entries (until the next asterisk) show the range of values allowed for that list; list headers show the field name in the Value column and the name of that set of values.

Note: One field can have several sets of values, and the same value can occur in several lists.

TRN320R DISPLAY		04/30/04 18:15:43	
YTRNNTA Ytrndta		Translate Field Conditions	
Target Environment FRN			
Number	Value	Description	Updated?
1001713	*	*CONFIRM	Y
1001713	N	Do not confirm	N
1001713	Y	Confirm	N
110046	*	*USER	Y
110046	SKINNES	SKINNES	N
1100583	*	*Continue transaction	Y
1100583	N	*TOUTES value	Y
1100583	Y	No	N
1100850	*	Credit Status	Y
1100850	1	*TOUTES value	Y
1100850	2	Bust	N
1100850	4	v. Poor	N
1100850	6	Secure	N
		Bank of England	N

ENTER=Updt F3=Exit F5=Refresh F8=Position
F9=Toggle F10=Chg All F12=Prev

Value descriptions are always translatable and sometimes the values themselves are translatable too (in this case, be sure the new values are uppercase, and that no entries are longer than the longest original entry).

Important! If you are translating values as well as descriptions, entries must be unique within a list.

If the translated entry occurs elsewhere in the Conditions file, a window is displayed with the option to translate all other occurrences automatically.

An alternative way to position to a particular entry on this screen is to move the cursor onto the required entry number and press the F8 key to move the value into the heading field and reload the screen.

Help Text

You can position to a particular entry by placing the cursor on the entry number and pressing the F8 key.

There are two types of narrative text in the dictionary: functional text and help text. The type field on the translation screen can be used to restrict the display to one type or the other.

Functional text contains programmers' notes and does not normally need to be translated. Help text is included in the final Help document for that function. If no Help text is defined for an entry, the functional text will be used instead, so in this case it does need to be translated.

Chapter 2: Installation

For CA 2E Translator there are 4 shipped save files, containing the following libraries:

YTRNPGM
YTRNDTA
YTRNSRO
YTRNEXP

You should restore these libraries to your machine using the RSTLIB command. For further setup and configuration instructions, see the rest of this chapter, and also Chapter 3 'Administering CA 2E Translator'.

Post-Installation Activities

After installing CA 2E Translator, you must set up a library list for CA 2E Translator users. The library list must contain the following libraries in the sequence shown:

- qtemp
- trnpgmlib
- trndtalib
- trnsrolib
- qgpl

Note: The application libraries are not required; the CA 2E libraries may be used instead of the runtime objects library trnsrolib.

Required new libraries should be set up (aplnsrclib if using msgcons and target environment libraries). See the System Set Up Menu for instructions.

You must create the Literals message file in the generation library if you plan to use msgcons rather than the standard CA 2E MSGIDs. For more information, see Appendix A "Using Message IDs vs. Literals."

Important! Do not use the shipped xxpmtmsg file; instead use the suggested default xxconmsg.

You must set up the job description qbatch in target environment libraries if you plan to use msgcons. This job description is used in the recompilation of DDS device files after scanning (see Recompile device files on list under Screen and Print Files Menu). The library list must include these libraries:

- Target environment library
- aplgenlib
- y1sy

CA 2E Translator supports dbcs languages. Do the following to prevent the display of messages warning of the possible presence of dbcs data:

Work with System Reply List Entries (wrkrpyle)

Do the following to add a system reply list entry:

```
addrpyle ('cpa4062' 'g')
```

Important! This step is required for all installations, not just those using dbcs languages.

Arrange for the CA 2E Translator libraries to be backed up to tape regularly.

The tasks from the System Set Up menu should be carried out as required.

Non-English Operating Systems

CA 2E Translator no longer uses a work file built over the printed message file. The modifications to the logical file, (trmwrkl1) to include additional *Select/Omit clauses are no longer needed.

Toolkit National Language Libraries

Translation of a CA 2E-developed application must address two classes of text: text provided by the CA 2E product and text input by the application developers.

Translated versions of CA 2E product objects are available from CA for many languages. These translations are shipped in the National Language Support phase 1 (NLS1) libraries (y1syxxxx & y2syxxxx), which are also known as the LDO (Language Dependent Objects) libraries.

NLS libraries currently available are:

- Dutch
- Finnish
- French
- German

- Hebrew
- Italian
- Japanese
- Norwegian
- Spanish
- Swedish
- Uppercase English

To create the required product runtime objects (ydupappobj), the application developer includes the NLS1 libraries above the normal product libraries in his library list when running the command (the libraries are required for a complete application translation).

Examples of text provided by CA 2E include the conditional values display screen, the help text display screen, and various default messages.

Note: CA 2E is not required for operation of CA 2E Translator. CA 2E is required for the member list processing (that is, the initial build of the list of panels and the subsequent re-compilation in the case of hand-coded or CA 2E panels compiled without MSGIDs). CA 2E is **not** required for translation.

Multiple Users

The translation programs used by ytrnusr can be used by several translators at the same time; the set up and management programs, however, are designed for single-user operation **only**.

Multiple Applications

The Translator may be used on more than one application simultaneously by setting up separate libraries to hold application-specific information.

In order to translate multiple applications, you must do the following to set up another version of the trndtalib library:

1. Copy trndtalib as a new library.
2. Copy Translator user library list.
3. Edit the new list by replacing the old data library with the new library.
4. Change to new library list.

5. Set up new environment as described in the Post-Installation Activities section earlier in this chapter.

Program Fix Levels

Use `dsptaara` to view the fix levels of CA 2E Translator data and program sets as follows:

Library	Data Area
trnpgmlib	trnpgmfix
trndtalib	trndtafix

Note: The panels in an application can be translated all in one member list or in several lists, however, it is easiest if all of the panels on a list are translated before you start to work with another list.

Chapter 3: Administering CA 2E Translator

This chapter contains important information for the administrator who will be managing the installation and use of the CA 2E Translator. The administrator must have a technical understanding of how CA 2E Translator utilities function. Users performing the text translation require no technical knowledge.

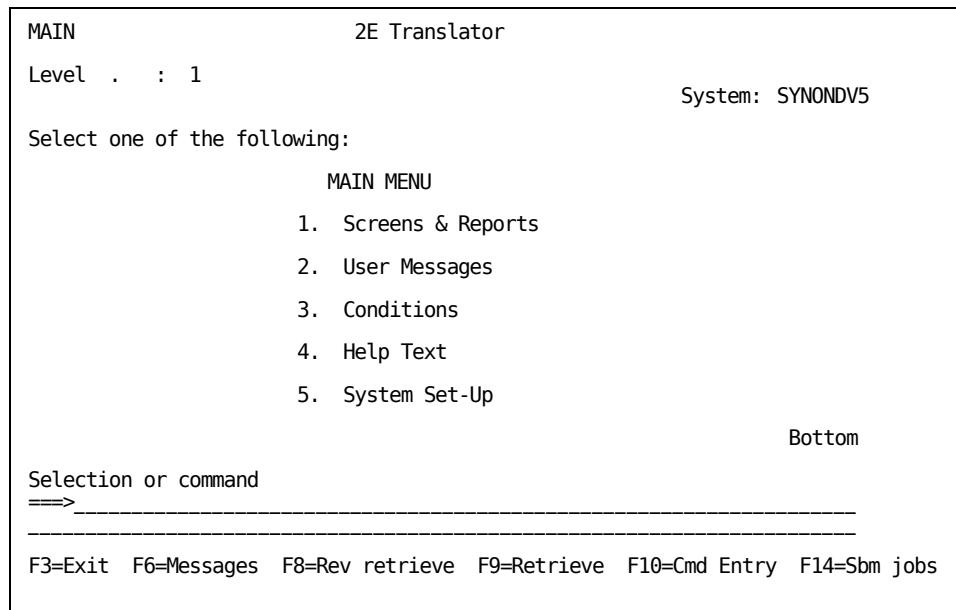
Important! We recommend that you, the administrator, review and understand all of the procedures in this chapter before proceeding to use the CA 2E Translator utilities; we also recommend that you run a limited trial translation before translating any “live” applications.

Using CA 2E Translator Utilities

Note: To display the Main Menu, enter the command YSTRTRN.

The CA 2E Translator utilities are organized according to the four classes of objects to be translated:

- Screen and print files
- User messages
- Conditional text
- Help text



Main Menu

CA 2E Translator utilities are grouped under a series of menus accessed from the Main menu:

- Screens & Reports
This option selects a utility that translates screen and print files.
- User Messages
This option selects a utility that translates text in user messages that was originally entered by the application developer.
- Conditions
This option selects a utility that translates text and, if appropriate, external values of field conditions.
- Help Text
This option selects a utility that translates developer-keyed narrative.
- System Set-Up
This option selects utilities to set up and work with the translation environment. System setup should be carried out before any other function is attempted.

Note: In this guide, the various libraries and system values in the CA 2E Translator environment are referred to by logical names. Be sure to study the section about system parameters in the System Set-Up Menu section later in this chapter before starting the setup procedure and subsequent translation.

Processing Overview

This section describes the processing common to all dictionary types. An understanding of this common processing is provided to help you manage translation projects.

Update Dictionary GEN Entries

Any existing GEN entries are cleared out, and the dictionary is populated with a series of entries on the key of gen, showing the current text from the generation library.

Export Dictionary GEN Entries

If any remote sites are set up, all gen entries are copied to the export library. This export library is then sent to each remote site.

Import Dictionary GEN Entries

This option is run at each remote site on arrival of the export library. For each dictionary, clear gen entries, then copy in gen entries from the export library.

Update Dictionary org/tgt Entries

For each gen entry, the org entry is checked. The org (original) entry shows the previous text for this item. If not found, this is a new item and entries are added for org and for each local tgt language. If found, the text is compared, and if identical, the item has not changed and no update is required. If not identical, the org and all tgt entries are updated with the new text. For panel text, the previous version is archived if changed.

Translate Dictionary Entries

The user translates the tgt text for the relevant area using the facilities within the tool.

Update Live Files from Dictionary

On completion of translation, the administrator runs a routine for each language, which copies the files needed at runtime to the target library, and updates them with the translated text. The contents of this library can now be shipped with the application.

Screen and Print Files Menu

```
PANELS          2E Translator
Level . . : 1
System: SYNONDV5

Select one of the following:
          SCREEN & PRINT FILES MENU

Scan           1. Build List of Panels
               2. Edit List of Panels
               3. Update Literals Dictionary for Panels on List
               4. Translate Panel Literals in Dictionary
Update         5. Update Literals Live Files
               6. Display Literals Live Files
MSGCONs only  7. Re-Compile DDS Panels on List
               8. Remove Compiled Panels from List
               More...
Selection or command
==>_____
F3=Exit  F6=Messages  F8=Rev retrieve  F9=Retrieve  F10=Cmd Entry  F14=Sbm jobs
```

Build List of Panels

This option builds a list of all members in the nominated source file in aplgenlib. It then excludes all members other than screen and print files (the CA 2E commands ybldmbrlst and yfltmbrlst are used).

Edit List of Panels

This option allows member lists to be manually edited using yedtmbrlst. Entries may be dropped if not required for translation.

To de-select all entries prior to selection, do the following:

1. Press the F18 key and change the Update flag to -
2. Press the F17 key to flag all entries with -
3. Press the F18 key again and change the Update flag to Y
4. Now select the required entries with 1
5. Exit list maintenance with Remove entries flagged - = Yes

Update Literals Dictionary for Panels on List

This option scans panel source members and builds a dictionary of literal entries. It may be performed interactively or by submitting a batch job. For applications of more than a few functions, the batch option is recommended. Always use batch for trial runs, to assist diagnostics, as a job log is printed. This should be viewed as it contains comprehensive messages regarding the job's progress.

When scanning a large number of panels, the size of the job log produced may interrupt the job. If this happens, the logging parameters can be amended by changing the contents of the message USR0104 in trnpgmlib/trusrmsg. View this message using WRKMSGD and edit the logging parameters as required.

If performing remote site translation, see the chapter "Remote Site Management" for more information.

This option performs the following steps:

1. Scan Device Source

Each member on the list is copied into a work file and scanned.

Entries are made into a dictionary for all literals, containing the device file name, row and column, the message identifier, and so on.

Additionally, if the original source is either hand-coded DDS or produced by CA 2E without the MSGID facility, Translator does the following:

- Comments out original literal statements
- Adds a message constant statement for each literal
- Adds a message in the nominated message file for each literal
- Copies the scanned member to new source file

The utility handles literals of up to 132 characters in length. If a longer literal is encountered, a warning message is written to the job log, and a warning entry written into the new DDS. This enforces amendment of the code before a successful compilation is possible.

The member list should be viewed (using option 2) to check for any errors in list processing. Members in error will be flagged with an F (Fail).

If scanning DDS literals, it is also recommended that the resulting source code is viewed using SEU.

Update Target Entries & Flags

This option updates the original and target language entries in the dictionary for all local environments. It also rebuilds the index used in detecting duplicate literals.

New literals are added as target entries. Changed literals are updated and the old version archived for later access. Unchanged literals are unaffected. The update status for entries is reset accordingly.

Translate Panel Literals in Dictionary

This option presents the user with a list of all of the panels which are eligible for translation.

For more details, see the chapter "Introducing CA 2E Translator."

Update Literals Live File

This option updates the literals message file in the library of the selected target environment with all updated text from the dictionary. The message file is initially copied from aplgenlib, so all messages for panels not yet scanned are copied across in total and unchanged.

Display Literals Live File

This option displays the literals message file (aplpmmsgf) in the target environment library.

Re-Compile DDS Panels on List

This option is not required if the panels have been generated by CA 2E with MSGIDs. When invoked, it submits compilations using a nominated job description for all members successfully processed on a list. Should any submission be unsuccessful, then the appropriate member is flagged with *Fail in the member list.

The qbatch job description should be copied from aplmdllib to apltgtlib, and its library list amended to include the selected target environment library above aplgenlib. This is necessary for a successful recompilation.

Source members are taken from the new source file in aplnsrclib. Compiled objects are placed in the selected target environment library.

Device files in the target library are checked for and deleted.

The user job log is printed by this option and should be checked for completion messages.

Submitted jobs can be viewed using F14 from the command line.

The member list should be viewed afterwards (using option 2) to check for any errors in submission of the compilations. Members in error will be flagged with an F (Fail).

Note: Errors in actual compilation will not be shown here. These should be detected by running the Check Compiled Device files Exist option, or from the job logs and spool files.

Remove Compiled Panels from List

This option is not required if the panels have been generated by CA 2E with MSGIDs.

This option checks entries on the member list for the existence of a compiled object in the target library and removes the entry if the object is found. The member list should be viewed afterwards to check that it is empty.

Operational Notes

It is recommended that standards are applied in development to literals usage. Much duplication (and hence workload) can be avoided by adoption of standards; for example, uppercase for all initial letters, Nbr for number, and so on.

It is particularly recommended to check the label text on all fields in the data dictionary after they are set up. Check that this text is compliant with the standards since the label text (and not the field name) is inherited when the field is used on a screen.

Note: Changing the data dictionary field label text after the field has been included on a screen has no effect on the screen label.

Translated text may not be longer than the original text. Otherwise, there is a risk that the following field will be blanked out because its field attribute character has been overwritten.

English is the shortest of the major languages. By comparison, French and Swedish are about 30% longer, and German about 40% longer. Therefore, translated text usually requires abbreviation unless extra spaces or filler literals have been included for this purpose.

It is recommended that the CUA screen design standards are adopted, in particular with respect to field label trailers. This gives longer literals with trailing characters that allow more room for translated text.

The site may wish to use field trailers to allow more room for translation while not wanting CUA standard characters.

Customer	-----
Date of order	-----

This is most easily achieved by designing and generating the panels with “.....:” style leaders and removing them in translation using the string scan/replace facilities. This requires that the development language is also treated as a foreign language.

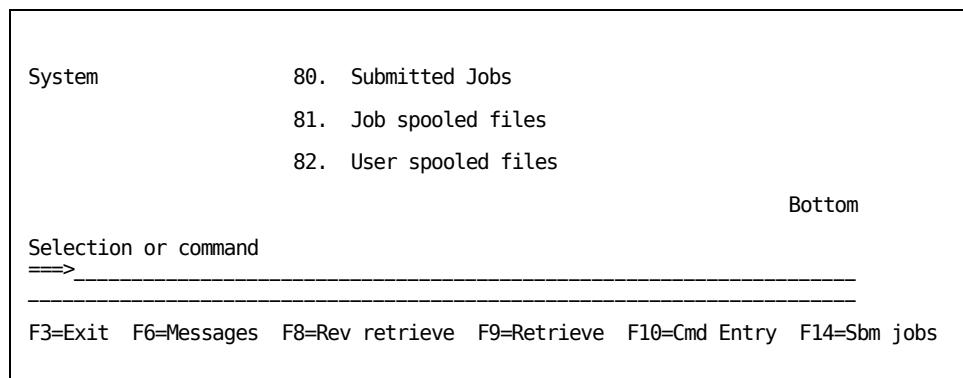
Another effective technique is to place a non-displayable character (such as a non-displayed blank - hex.41) at the end of the desired length of label. The MSGID is then generated at this length, but the translator and end-user just see blanks. This is particularly useful in the case of screen title text. The developer would require a keyboard with hexadecimal capacity, or the ability to copy this special character.

In the case of full-width literals on MSGID screens (such as sub-file selection text or command key text) the CA 2E generator will generate a full-screen MSGID (for example, 78 characters long) even if the actual text is less than this. Also, column header labels are defined as the length of the header literal or the length of the underlying field, whichever is greater. This makes translation much easier (this advantage is not available with msgcons).

The following special characters are unchanged on all national language keyboards: + - , : ; _ () ? = * ' " > < . Other special characters may appear differently on foreign terminals.

User Messages Menu Screen

USRMSG5	2E Translator
Level . . : 1	System: SYNONDV5
Select one of the following:	
USER MESSAGES MENU	
1. Update User Messages Dictionary	
2. Translate User Messages in Dictionary	
3. Update User Messages Live File	
4. Display User Messages Live File	



Update User Messages Dictionary

User Message definitions are extracted from the application model internal files into the User Messages Dictionary file, using temporary logical files built in qtemp. New and updated message entries are given a status of translated=N. Unchanged entries are not affected.

Translate User Messages in Dictionary

For more details, see the chapter "Introducing CA 2E Translator."

Only text-type messages are displayed for translation (for example, err, sts, inf, cmp and rtv, but not exc).

Update User Messages Live File

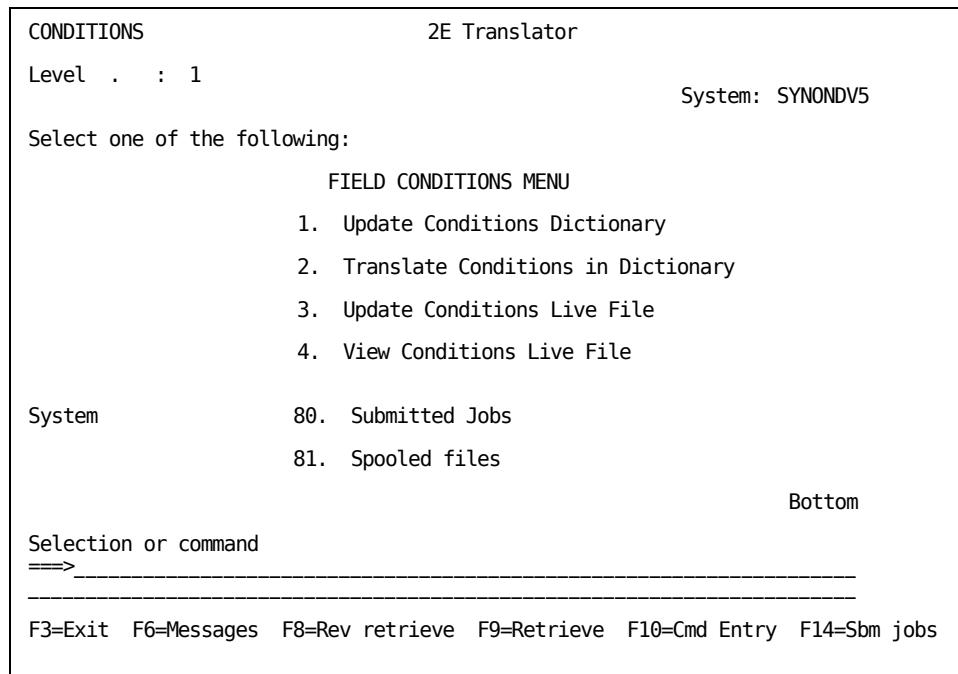
The User Messages message file is always copied to the selected target environment. This ensures that any new non-text messages are transferred. All messages with entries in the User Messages Dictionary file are then updated with the text from the target entry.

Display User Messages Live File

The User Messages file for the selected target environment can be displayed on the screen. Second level text is accessible behind the individual entries.

Field Conditions Menu

Note: First ensure the Convert Condition Values command (ycvtcndval) has been run.



Update Conditions Dictionary

This option updates the Conditions dictionary file from the Conditions file in the Generation library. New and changed conditions are updated with the genlib text, unchanged conditions are left with their translated text, and unused conditions are deleted. The updated flag is set appropriately.

This option can take considerable time. It is recommended that you run it in batch.

Translate Conditions in Dictionary

For more details, see the chapter "Introducing CA 2E Translator."

Update Conditions Live File

This option updates the Conditions file in the target library with the translated text from the dictionary, creating the physical and logical files if required.

View Conditions Live File

This option displays the Conditions file in the target library.

Help Text Menu

```

HELP_TEXT                                2E Translator
Level . : 1                               System: SYNONDV5
Select one of the following:
    HELP TEXT MENU
    1. Update Narrative Dictionary
    2. Translate Narrative Dictionary
    3. Update Narrative Live File
                                                Bottom
Selection or command
====>-----
F3=Exit  F6=Messages  F8=Rev retrieve  F9=Retrieve  F10=Cmd Entry  F14=Sbm jobs

```

Update Narrative Dictionary

Use this option to update the narrative dictionary from the application model.

Note: This option copies the internal model physical file of developer-keyed narrative text (ytxtdtarfp) from the model library to the narrative file in the translator data library.

Translate Narrative Dictionary

This option allows the user to translate the narrative.

Update Narrative Live File

This option updates a copy of the model narrative file in the target environment library with translated narrative text from the dictionary.

Note: This option copies the narrative file and required logical files to the target environment library if not present, before copying data from the dictionary file.

Additional Steps for Help Text Regeneration

To incorporate the translated text into a Help Text document, the affected functions need to be regenerated. Do the following:

1. If translating at a remote site, create target environment libraries on the development machine for all remote environments using the same names.
2. Create a qtxtsrc or quimsrc file in the target environment library to hold the translated help text members.
3. If translating at a remote site, ship the translated model files in the target environment library (ytxtdta*) back to the same library on the development machine.
4. Set your help text generation model value to ygenhlp(*only), if required. This will cause only help text to be generated (not files and programs).
5. Include the Toolkit National Language libraries (y1syvxxxx y2syvxxxx) in your library list above the product libraries to use the translated versions of the Help Text skeletons. These skeletons can be viewed in y2syvxxxx/ydftsrc or ydftuimsrc. See the section on Toolkit National Language libraries for a description of these libraries.
6. Regenerate help text to include the translated text. Change the ygenlib model value, or change the source and objects locations parameter to place all results in the target environment library, not the normal generation library.
7. Ship the resulting source (or objects if using UIM) back to the remote site, and reset model values, library list, and so on.

Note: Other text, such as condition names and field labels, are also included in generated text directly from within the model. Translation of this text should be performed on the generated source, using SEU or S/38 edtxt.

System Setup Menu Screen

Be sure to complete *Product Installation* before performing System Setup.

```

SETUP                                2E Translator
Level . : 1                           System: SYNONDV5
Select one of the following:
                                     SYSTEM SETUP MENU
SETUP          1. Set Up System Parameters
               2. Set Up Target Environments
EXPORT         3. Export to Remote Translation Site
               4. Import at Remote Translation Site
MISCELLANEOUS ? 5. Create DDS Sourcefile (if not using message Ids)
               6. Cleardown Translator environment
               7. Set Up Translator for previous releases of 2E
               8. Import Translator 4.0 data
                                     More. . .
Selection or command
====>-----
F3=Exit  F6=Messages  F8=Rev retrieve  F9=Retrieve  F10=Cmd Entry  F14=Sbm jobs

```

Set Up System Parameters

Within CA 2E Translator, the environment is defined by *system values*. System values must be set up before commencing translation using the Set Up System Parameters screen. In this guide, system values are referred to by their logical names to allow for flexibility in set up. For example, the Application Model Library is called aplgenlib and the Application Conditions File is called aplcndfil.

All system values are validated on entry; if a value is not required in a particular installation, a “dummy” value such as qtemp should be entered instead.

The following illustration depicts a typical environment for a site translating a single application from English into French. The application is called SRS, and the model prefix is RS.

Note: This model is generating MSGIDs, so no new source library is required.

```

TRN520R ENTER                                         04/30/04 05:14:13
                                                Set Up System Parameters

TRANSLATOR  Programs library .... YTRNPGM      (TRNPGMLIB)
           Data files library .... YTRNDDA      (TRNDTALIB)
           Export library .... YTRNEXP      (TRNEXPLIB)
           Devices Member list .... MSGIDMBRS  (TRNDEVLST) Type M (L//M/S/C)
           Msg Pfx / Last Nbr used   M          0      (TRMSGPFX/TRNLSTMSG)

APPLICATION Model library .... SRSMDL      (APLMDLLIB)
           Generation library .... SRSGEN      (APLGENLIB)
           Prompt Messages file.... RSPMTMSG  (APLPMMSGF)
           User Messages file .... RSUSRMSG  (APLUSRMSGF)
           Conditions file .... RSVLLSP     (APLCNDFIL)
           New DDS source library.. QTEMP       (APLNSRCLIB)

Dvpt Machine CPU Number44DB429

ENTER=Continue F3=Exit F12=Previous N.B. Check correct TRNDTALIB in liblist

```

System Value	Description
TRNPGMLIB	Contains CA 2E Translator programs. This value is shipped as YTRNPGM.
TRNDTALIB	Contains CA 2E Translator data. This value is shipped as YTRNDDA.
TRNEXPLIB	Contains CA 2E Translator export data for shipment to remote translation sites. This value is shipped as YTRNEXP. If using remote sites, create this library, or enter a dummy value such as qtemp.
TRNDEVLST	The name of the member list of all device members in aplgenlib for the Screen & Print files menu option. See Set up options Work with All & New Panels for more information.
TRNDLSTTYP	The devices list type; for example, whether the original device source members contain CA 2E MSGID statements or hard-coded literals. See the appendix "Message IDs vs. Literals" for more information about making this decision.
TRNLSTMSG	The last message number allocated when working with hard-coded DDS literals.
APLMSGPFX	The single-character prefix for all new message identifiers.

System Value	Description
APLMDLLIB	The Model library of the application being translated.
APLGENLIB	The Generation library of the application being translated or the library where application objects reside (in particular, the device file source members, message files, and conditions file).
	If the source is not stored in the genlib, nominate the library that does hold the source, and copy the conditions file and both message files into that library.
APLUSRMSGF	The Name of the User Messages file of a CA 2E-generated application (as defined in the model, in data area aplmdllib/ymsgvnmrfa).
APLPMTMSGF	The name of the Prompt Messages file of a CA 2E-generated application (as defined in the model, in data area aplmdllib/ypmtmsgrfa).
	If you are not using CA 2E to generate MSGIDs, do not use the default CA 2E prompt message file named xxpmtmsg.
APLCNDFIL	The name of the application Conditions file in the format xxvllsp, where xx is the data area aplmdllib/yvlspfxrfa.
APLDEVSRCF	The file of DDS panel source members and is programmatically set to qddssrc.
APLNSRCLIB	<p>The library for new device file source members containing msgcon statements.</p> <p>This library is not required if MSGIDs are being generated from the CA 2E model. Another library distinct from aplgenlib should be set up to hold the converted source, to avoid any possibility of operator error resulting in the original source being overwritten.</p>

Set Up Target Environments

A target environment should be set up for each end user, language, or site. Typically, a target environment is a language as shown in the following illustration. However, if two sites that speak the same language required different translations (for example, Paris and Brussels), two environments should be set up.

TRN510R DISPLAY

04/30/04 05:14:34

YTRNNTA Ytrndta								
Display Target Environments							Local	Box Dvpt/Live=D
2>Edit 4>Delete								
?	I.D.	Environment Library	Environment Name	Machine Location	Auth : Dtls	CPU Number	Machine Model	Auth Level
FRN	SRSVFRN	French	LOCAL		44DB429	B50		2
ESP	SRSVESP	Spanish	REMOTE		44B1081	E04		1

Note: If you are using CA 2E Translator 4.0, there is no need to set up an environment for the original development language. CA 2E Translator is shipped with this environment set up but hidden, and all objects that were stored in the org library are now stored in the trndtalib library.

Target environments reside either on the development IBM i or on another IBM i. An environment is either *local* or *remote* depending on whether it is on the same IBM i as you. Therefore, an environment on the development box is *local* to the development box, while an environment on a remote box is *remote* to the development box, but *local* to the users of that remote box.

Many target environments can be defined. Note that a single remote machine may have several target environments (for example, when two offices are sharing a machine).

If a local target environment is added after initial set up, Translator creates a set of entries in each dictionary for it by copying the original (org) entries. This may take some time. To add a remote target environment, first add it as local - this will create the required entries. Then use the procedure described in the Remote Site Translation section to move it to the remote machine.

To move an environment from local to remote or back again, see Moving TEs between Local and Remote in the chapter "Remote Site Management."

Export to Remote Translation Site

See the chapter "Remote Site Management."

Import at Remote Translation Site

See the chapter "Remote Site Management."

Create DDS Sourcefile

This option prompts the Create Physical File command, to enable creation of a source file to hold the new device file source members with msgcon statements. This is unnecessary if using CA 2E MSGIDs, or if a suitable file already exists. A single file should be created in the application new source library (aplnsrclib) if working with msgcons.

Cleardown Translator Environment

This option clears all data files used by CA 2E Translator; it deletes all member lists and initializes the Literals message file in the model generation library if msgcons are being used (for example, list type = L). It can be submitted in batch (sbmjobj cmd(call trn540c)).

This option also initializes prompt message files in the TgtEnv libraries. Setup parameters and the target environment file are not affected.

Important! This option should only be used at the start of processing for an application.

Set Up Translator for Previous Releases of Error! Unknown document property name.

This option looks at the version of CA 2E currently in use and configures CA 2E Translator appropriately. CA 2E Translator is shipped compatible with CA 2E 4.1, and so this option only needs be taken if a later release is being used. The option can be taken multiple times and is reversible.

Import Translator 4.0 Data

Perform the following procedure to migrate data from Translator 5.0, 5.1, or 5.2 to the current version:

1. Check that you have a recent backup of the 5.x environment.
2. Install the 8.1 libraries as you would for a new installation.
3. Rename or copy the 8.1 trndtalib library to match its 5.x equivalent.
4. Copy the data from each of the 5.x database files listed below to its 8.1 equivalent using the command:

```
CPYF FROMFILE(YTRNDA52/TRxxxxP) TOFILE(YTRNDA/TRxxxxP) MBROPT(*REPLACE)  
FMTOPT(*MAP)
```

File Name	Text Description
TRCNDSP	Condition Dictionary

File Name	Text Description
TRLITSP	Literal Dictionary
TRNARRP	Narrative Dictionary
TRTENV	Target Environment
TRUSM1P	UsrMsg Dictionary
TRUSM2P	UsrMsg Dictionary 2nd Lvl
YMBRLST	Member List

Set up your library list and run Translator 8.1, entering the authorization code and system values as necessary. The Target Environments should already be present.

You are now ready to start running under 8.1. Contact CA Customer Support if you experience difficulties.

Translator 4.0 to 8.1 Data Migration

Follow the following procedure to migrate data from Translator 4.0 to the current version:

1. Check you have a recent backup of the 4.0 environment.
2. Check that the 8.1 version of `trndtalib` does not have the same name as the 4.0 version. If necessary, rename the 4.0 library before installing Translator 8.1.
3. If you translated multiple languages at 4.0 by creating multiple copies of `trndtalib` at 4.0, choose one language to be your base target language.
4. For each language other than base, copy all `tgt` records from `trusm1p` & `trusm2p` in their `trndta40s` into the base `trndta40`. Use `cpyf`, restricting on key of language.
5. For each language, check that `aplorglib` is still present and contains original language versions of `aplpmtmsgf` & `aplcndfil`.

For each language, run `Copy Conditions to dictionary` and the `Copy Conditions` file to Target library to update `aplcndfil` in the 4.0 target library. (It is not necessary to have completed translation of the whole application). Check the conditions files in `gen`, `org` & `tgt` have the same number of records.

For each language, set up an 8.1 target environment. Create a TE library for each, or re-using the 4.0 target library as desired. Be sure to use the 4.0 target language code as the 8.1 TE code.

For each language, if not re-using the 4.0 target libraries, copy the conditions file (aplcnfdfil), the prompt messages file (aplpmtdmsgf), and the prompt messages archive file (called *archpmtmsg*) into the TE library.

For each language, check that the system values in the 4.0 environment are correct, in particular the original language. If you have changed the original language since starting to translate the application, contact CA technical Support for special instructions.

A problem can occur if user messages have been deleted in the model and the same message number (for example, usr0011) re-used by developers for a different message. If this has happened it will result in orphan entries in the user messages dictionary file. Use Query to check for this.

Check that there are no entries in the Translator user messages files that have been deleted from your model. Use a query, joining yrndta40/trusm1p & aplmdllib/ymsgdtarfp with join type 3, joining where t01.m3msgx=t02.@@msg. Delete all orphan records found in trusm1p, along with any associated second level text records in trusm2p.

Check the number of records in yrndta40/trusm1p using dspfd. If more than 10,000 records, chgpf y4usm1p & y4usm2p (size *nomax) accordingly.

If you need to rename a target environment, change the higher level key language id for the relevant records in trusm1p & trusm2p (use SQL or similar).

Change library list to the Translator 8.1 list and run the import option.

If setting up remote sites at 8.1, set them up initially as local for the 4.0 to 8.1 data migration. Once this is complete, follow the instructions in Moving TEs between Local & Remote to move the sites to remote.

If possible, migrate all 4.0 languages together as above. However, if data is not available from some remote sites, do the following:

1. Migrate the available sites first & start translating at 8.1.
2. On arrival of the later 4.0 environments, go through the procedures above, using the previously selected language as base. Be sure to make all checks for orphans and so on For user messages, remove the base language target entries from yrndta40/trusm1p & 2p, using cpyf.
3. Copy the 8.1 dictionary files and TgtEnv file to another library.
4. Clear the 8.1 dictionary files using clrpfm.
5. Edit the TgtEnv file, deleting the previously-migrated languages and adding the new ones.
6. Run the migration job & check for success.
7. Re-add the deleted entries to the TgtEnv file (trtenvp) using ywrkf or dfu.

8. Copy all dictionary entries for the previously migrated languages back to the dictionary.
9. Check for success.

Work with All Panels

The panel's member list has two main functions: 1) to drive the scan of the DDS and update of the dictionary in option 3, and 2) to present a list of panels to the translator to work with in option 4.

It may be helpful to maintain two lists; for instance, one of newly updated panels and one of all panels. This allows the administrator to only scan and update the dictionary for the new panels, but to present either this list or a list of all panels to the translator.

To set this up, do the following:

1. Select the option Work with All Panels to set the TRNDEVLST data area to *newmbrs*
2. View the System Parameters panel and check the change has been made correctly
3. Build the member list, filter it as required, and then submit the scan/update
4. Select the option Work with New Panels to set the TRNDEVLST data area to *allmbrs*
5. Re-build the member list to include all translated or new panels

The translator can now start translating, and can select via these two options whether the list of panels initially displayed is the full list or just those changed.

Chapter 4: Remote Site Management

Remote site translation using CA 2E has several advantages:

- The location is often more convenient for the translator.
- Translation can take place after the application has “gone live.”
- It is not necessary to set up foreign keyboard mapping on the development machine.

The key principle in the maintenance of remote environments is that only the export library is sent to the remote site, not the whole data library.

Note: The export and import procedures described in this chapter should be used where the actual text translation is done on a remote site. The remote site does not need CA 2E or your application model.

Remote Site Procedures

The following sections outline the procedures for using CA 2E Translator at remote sites.

Initial Installation at a Remote Site

Install CA 2E Translator on the development machine if necessary, working through the Installation section of the user guide and the Set Up menu.

Be sure to complete the following steps:

- Set up system parameters
- Set up target environments (including the planned new remote site)
- Clear down the CA 2E Translator environment

Ship the CA 2E Translator programs, data, and runtime libraries to the remote machine and restore them there. Save/ship the data library with `savdta(*no)`. Be sure to use the same library names as you did on the development machine.

Set up the environment for the remote CA 2E Translator user including user profile, library list, initial menu, and so on. The remote CA 2E Translator user’s library list should contain the same libraries as the development machine.

Your application model and source code are not required by CA 2E Translator on the remote machine. However, a library must exist with the name of the application generation library (aplgenlib) on the remote machine—create this library if it is not already present. If the library already exists, be aware that CA 2E Translator moves the development machine versions of the prompt messages file, the user messages file, and the conditions file into this library from the export library during the import process.

Obtain authorization codes for the remote machine and apply them using the Grant Licensing Authority (YGRTLICAUT) command.

View the System Parameters screen and confirm that all values are correct.

Important! You cannot change these values at the remote site—they are protected and held in data areas.

Run the Cleardown Translator Environment option at the remote site.

Create Target Environment libraries for each now-local environment.

Check the Translator libraries are being backed up on the remote machine.

Exporting to a Remote Translation Site

For the first shipment, follow the steps in the previous section for initial remote site installation. For the second and subsequent shipments, no special action is required.

Run the source scanning/dictionary update jobs on the development machine for all subject areas that you plan to translate (for example, panels, user messages, conditions, narrative, and so on).

Run the export option on the development machine to populate the export library.

Transfer this library to the remote machines. The following procedure is recommended if distributing objects via snads:

Do the following at the development site:

1. Create or clear savefile (crtsavf or clrsavf)
2. Save library to savefile (savlib *savf- check for i OS level changes)
3. Send savefile to remote site (sndnetf)

Do the following at the remote site:

1. Create or clear savefile (crtsavf or clrsavf)
2. Work with net files (wrknetf)

3. Receive netfile into savefile (rcvnetf)
4. Clear library if present (clrlib)
5. Restore savefile into library (rstlib *savf)

Importing at the Remote Translation Site

1. Run the import option after loading the export library onto the remote IBM i.
2. Run the update dictionary option for each subject area.

Note: The job will detect that it is running at a remote site and so will not try to scan the dds and create gen entries. It only performs the second part of the scan job, updating the org and tgt entries from the new gen entries.

Translating and Updating Live Files

1. Translate each subject area in the normal manner.
2. Update the live file for each area in the normal manner.

Note: Translated text is held in the tgt dictionary entries at the remote site and is never sent back to the development site.

Scanning in Several Batches

If translating at a remote site, and scanning panels in several batches, be sure that you run the export/import procedure after each scan; otherwise, any panels not included in the last batch will not be updated in the remote site dictionary. If this has occurred, you can re-scan the omitted panels and run the export again to fix the problem.

Moving TEs Between Local and Remote

To move a target environment from one machine to another, **do not** run Export to Remote Translation Site—this is **only** for updating existing remote sites.

Do the following:

1. At the development site, amend the CPU number and authorization code details for the target environment entry.
2. Copy the target environments file (trtenvp) from the development machine to the affected remote machines.

3. On the host machine, copy the entries for that target environment from the dictionary files in trndtalib (listed in *Upgrading from Translator 5.0*, with the exception of ymbrlst) to trnexplib.
Use cpfy, restricted on Tgt Env code (xxtenv, where xx is the individual file prefix). Clear the target files first, if present.
4. If setting up a remote environment on a machine previously without Translator, you must copy the org entries along with the target entries for each dictionary.
5. Check the copies are successful, back up trndtalib, then delete the copied orphan entries from the dictionary files in trndtalib using SQL.
Note: It is not absolutely necessary to delete these orphan entries if SQL or a similar tool is not available.
6. Move the target environment library and trnexplib from the host machine to the target machine.
Delete any previous copies of these libraries on the target machine beforehand.
7. Copy the dictionary file entries from trnexplib to the dictionary files in trndtalib on the target machine.
8. Test and back up.

You are now ready to translate.

Appendix A: Using Message IDs vs. Literals

Using Message IDs vs. Literals

If the subject application is developed in CA 2E, it can be generated either with traditional constants in the device file DDS or MSGIDs.

CA 2E supports multi-lingual applications through the advanced national language support features supplied with the IBM i. Using these features, the user can see a screen in one of several languages with only one program and display file (depending on the message file that is uppermost in his library list).

msgcons integrate the text at compile time (early binding), thus a new set of device files must be created and compiled for each new language translation.

If msgids are used, the generator codes msgid statements into the dds source of the display file, and writes a message containing the text into the message file. At runtime, this text is retrieved by the operating system at micro code level and bound into the screen at runtime. This method of access is much faster than using hll code, but does represent a slight overhead compared to a hard-coded screen or use of msgcons. The advantages of this method are the simplicity of maintaining one set of programs and display files, and not requiring to recompile device files after translation. In addition, the full width of column headers are available for translation.

The following table shows the results of comparative tests of performance for the two types of screens. The tests took place on a lightly loaded B45 using a COOL:2E Prompt Record function, with no database accesses or extra logic.

	Number of Literals	Type	Refreshes in 30 Seconds	Average Refresh Time
1.	82	DDS	47	0.64 seconds
2.	82	MsgID	21	1.43 seconds
3.	30	DDS	90	0.33 seconds
4.	30	MsgID	38	0.79 seconds

We recommend that sites facing this decision make their own tests to ensure all local factors are taken into account. Simply generate a typical screen function with constants, regenerate it with MSGIDs into another library, and then run them back-to-back.

In practice, most users find that the i/o due to MSGIDs is not a significant factor in overall screen refresh time (many other factors, such as database access, need to be included as well), and thus opt for the flexibility of MSGIDs.

To move from MSGIDs to MSGCONs or back again, change the following:

Translator: List name (trndevlst)

List type (trndlsttyp)

Application: Prompt message file (aplpmtnsgf)

DDS source library (apldevsrcf)

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