KINGDOM OF CAMBODIA
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Cambodia Inter-Censal Population Survey March, 2013

Data Entry Manual

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Chapter 1: Introduction

1. Introduction

The purpose of this manual is to introduce keyers to the data capture programs that pertain to the questionnaires and forms used for the 2013 Cambodia Inter-Censal Population Survey (CIPS), conducted from 3 to 13 March, 2013.

Keyers will use computers to enter CIPS data with the Census and Survey Processing System (CSPro) software package. CSPro is free software distributed by the United States Census Bureau that is used by many organizations in over 100 countries for data entry, editing, tabulation, and dissemination of the results from censuses and surveys.

2. Data Entry Concepts

2.1 Definitions

Field: A field is the basic element on a data entry form into which you enter data. During data entry the cursor moves from one field to the next, according to the order and rules defined by the data entry application. Fields are shown on the form as boxes with tick marks to indicate how many digits or characters may be keyed.

Some fields cannot be entered. They may contain data previously entered on another form, or they may be automatically populated by the program. Such fields appear dark gray in color.

Roster: A roster is a group of fields that repeats more than once. The default roster orientation is horizontal, which shows individual fields across the column headings. Each row of a roster corresponds to an occurrence of a group. A roster is used for questions that may be asked multiple times. For example, the questions on population are displayed on a roster because there may be more than one person in a household.

Form: A form contains fields, rosters, and text. Forms may be larger than the actual area of the computer screen. A form will scroll automatically to ensure that the field you are entering is visible on the screen.

Data entry applications may consist of several forms. As you complete one form the next form is presented. If you move backward from the first field on a form, the previous form is presented.

Case: A case is the primary unit of data in the data file. A case usually corresponds to a questionnaire or household. For example, the Form B application consists of several person rosters, a fertility roster, a deceased person roster, and a form for household information. For the Summary Form 2 and Form A applications, a case consists of the data entered for a particular enumeration area (EA).

File Tree: The file tree is shown on the left side of the screen. The file tree shows all cases in the data file. For example, in the Form B application the tree will show the cases (or households) previously entered. The file tree is hidden in the Summary Form 2 and Form A applications.
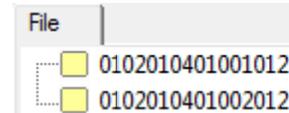
2.2 Field Ranges

The data entry screens display all the questions that are on the questionnaires. These individual questions are called fields. Each field has its particular range of valid entries. For example, the field Sex can only have code '1' for male or code '2' for female. The valid codes for a particular field are called ranges, i.e., the range for Sex is from 1 to 2. All other codes for the field Sex are invalid and thus out of range. If you try to enter a value that is out of range during data entry, CSPro will display the error message "OUT OF RANGE." When a valid value for a field has been entered, the field will turn green.

2.3 Field Sequences

Some fields are programmed to occur in an ascending sequence; i.e., 1, 2, 3, etc. Examples of such fields include the serial numbers on many of the rosters in the questionnaire. If you try to enter a value that is not in the correct sequence, CSPro will display the error message "OUT OF SEQUENCE."
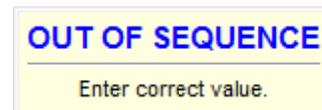
2.4 Leading Zeroes

If the number of characters entered for a field equals the field length, the cursor proceeds immediately to the next field. However, if the number of characters entered for a field is less than the specified length, the enter key can be pressed to move the cursor to the next field. CSPro will automatically zero-fill the field. As an example, the field Previous Residence has a length of 4 digits. If the code for Previous Residence is '1', you can enter only '1' and press enter. The system will automatically fill the first three leading zeroes. Alternatively, you can key in the zeroes yourself, entering '0', '0,' '0', '1.' You can try both techniques and determine which works better for you.
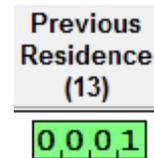
2.5 Skip Patterns

Some questions are only applicable under certain conditions. For example, the question Age at First Marriage is only applicable for people who are married or were married at once point. For people who are never married, this question should be left blank. It should be skipped. Many skip patterns are programmed into the data entry applications, and the cursor will automatically jump to a different field depending on the value entered for the variable that triggers the skip. Skipped fields will appear yellow.

2.6 Consistency Checks

Besides range checks and skips patterns, the data entry applications also include some consistency checks. A consistency check compares the values between two or more variables and verifies their consistency. For example, the Form B application will check that a head of household is at least 12 years-old.

If the software detects a situation where two or more variables are not consistent, it will display an error message. There are two kinds of error messages. One requires that you correct the error. For example, if the sex of a spouse is equal to the sex of the head of household, an error message will indicate this problem. Press F8 to exit the error message window and correct the typo.
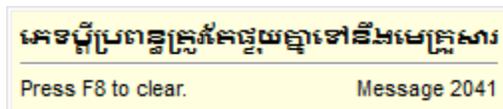
Another kind of error message allows you to continue with data entry or to reenter the field. In this case, you should first find out if you have made a typing error. If so, click on the "Reenter" button and fix the code. If the value you entered is what was on the questionnaire, then click the "Continue" button. In case of any ambiguity you should call the attention of your supervisor.
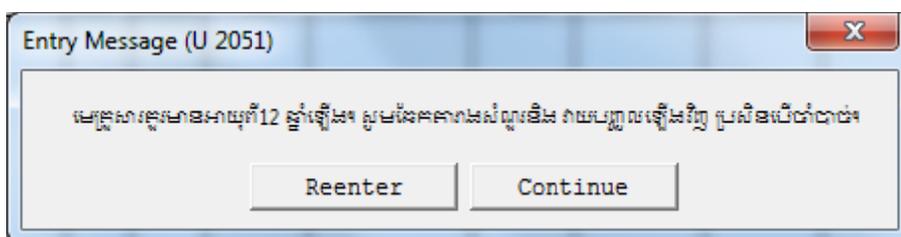
2.7 Correcting Typing Errors

To make a change in a record during data entry, move the cursor to the field requiring a change and type over the existing value. The cursor can be moved with the right and left arrow keys. If the new value is valid, the cursor will move to the next field requiring data entry.

If a field change results in a skip being followed, the intervening fields (those between the field being changed and where the cursor will be positioned after the skip) will be set to blank. By the same token, if a field change means that previously skipped fields now require an entry, the cursor will move to the first field requiring an entry.

Occasionally, it may be necessary to have the system accept a value that does not pass the field check. Some fields may have received an erroneous code from the field. In these cases, you can use the mouse to click on the next applicable field, bypassing the data entry application's checks. You should only do this after assuring that you have entered the field's value properly into the system.

You should always key into the system exactly what is on the questionnaire.

3. CSPro Concepts

3.1 Modes of Operation

There are five data entry modes. Each mode can be activated by clicking on a button in the toolbar, or with a keyboard shortcut.

Add	▣	*Control + A*	Enter new cases to the data file.
Modify	⊹	*Control + M*	Modify cases that already exist in the data file.
Verify	▣✓	*Control + V*	Dependent verification of cases in the data file. This mode is disabled for CIPS 2013 data entry.
Pause	⏸	*Control + P*	Temporarily stop adding or modifying cases. The timer that is used to collect statistics on data entry efficiency is suspended. Pause is used when you plan to continue from where you left off after a short delay; e.g., a break to use the restroom.
Stop	■	*Control + S*	Stop adding or modifying cases. As with Pause, the timer is stopped.

3.2 Adding or Deleting Occurrences in Modify Mode

When modifying a case that already exists, CSPro displays the number of occurrences (rows) in a roster that were entered during the first entry. If you click on a row to add a new occurrence, CSPro will display an error message, "Cannot go to an occurrence that does not exist." To insert a new occurrence before the currently selected row, choose "Insert Group Occ" from the Edit menu (or press F3). To add a new occurrence at the end of the roster, click on the last row and then choose "Insert Group Occ After" from the Edit menu (or press Control + F3).

To delete an occurrence, in either add or modify modes, choose "Delete Group Occ" from the Edit menu (or press F4).

Edit	Navigation	View	Options	Help
Insert Case				Ins
Delete Case				Del
Find Case...				Ctrl+F
Insert Level Occ				Alt+Ins
Add Level Occ				Alt+A
Delete Level Occ				Alt+Del
Insert Group Occ				F3
Insert Group Occ After				Ctrl+F3
Delete Group Occ				F4
Sort Group Occ				F5

3.3 Ending a Roster

Sometimes the size or a roster (and thus the number of occurrences that can be entered) is controlled by the data entry program. This occurs, for example, for Part 2 of Form B. Other times you are responsible for indicating to the data entry program that you have entered all the applicable rows in the roster. When you have entered all the rows that exist on the questionnaire, choose "End Group" from the Navigation menu, or press Control + / (forward slash). This will move the cursor beyond the roster, to the next section of the questionnaire. The following table indicates how to finish data entry for all of the CIPS 2013 rosters:

Rosters	How to move to the next section…
Summary Form 2	Press Control + /
Form A	Press Control + /
Form B, Statement 1.1 (Usual Members Present)	Press Control + /
Form B, Statement 1.2 (Visitors Present)	Press Control + /
Form B, Statement 1.3 (Usual Members Absent)	Press Control + /
Form B, Part 2 (Individual Particulars)	The program controls the number of rows
Form B, Part 3 (Fertility)	Press Control + /
Form B, Part 4 (Mortality)	The program controls the number of rows

3.4 Function Keys

To move around the data entry application, you can use the mouse to position the cursor on a certain field, or you can use the keyboard. It is a good idea to use the keyboard as much as possible because moving your hands from the keyboard to the mouse and back is not an efficient way to enter data.

F1   Displays the CSPro data entry help system.

F8   Clears an error message.

Enter   The enter key moves the cursor forward one field at a time. It will also fill
                   the field with any required leading zeroes.
Tab   The same as the enter key.
Down Arrow   The same as the enter key.
Right Arrow   The same as the enter key.

Shift + Tab   Moves backwards to the previous field.
Up Arrow   The same as pressing Shift + Tab.
Left Arrow   The same as pressing Shift + Tab.

Control + /   Ends data entry of the current roster.
F3   Inserts a row in the roster before the current position.
Control + F3   Inserts a row in the roster after the current position.
F4   Deletes the current row of the roster.

Page Up   Moves to the previous form.
Page Down   Moves to the next form.

Backspace   Removes the previously entered character from a field.
Delete   Deletes the entire contents of a field.

3.5 Status Line

The line at the bottom of the data entry screen is a line that gives the keyer some information on the current status of the session. The status line displays the internal name assigned to each field during the development of the data entry program. The system will show the name of the field whenever the cursor is positioned there. The current occurrence of a repeating group of fields (a roster) is also displayed.

3.6 Saving Data Files

Summary Form 2 and Form A

There is only one case when entering data for the Summary Form 2 and Form A applications. A case for these applications corresponds to an entire enumeration area. The expectation is that you will enter the entire contents of the enumeration area in one sitting, but if for some reason you must stop work for the day, or for an extended period, you can save the case in a partial status. Partial status indicates to CSPro that you will continue entering data for the case at a later time. To partially save the case, select "Save Partial Case" from the File menu, or press Control + R.

When you have finished entering data in the Summary Form 2 or Form A applications, end the roster by pressing Control + /, and then select "Yes" to indicate that you want to save the contents of the case. You can continue entering data by selecting "No." After you have saved the data file, the entry program will close.
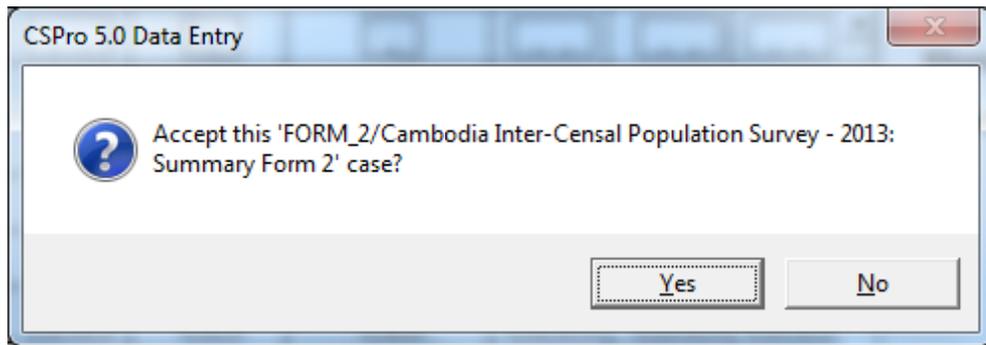
Form B

You will add many cases when entering or verifying Form B data. A case in Form B corresponds to an individual questionnaire. When you have finished entering the household data, CSPro will automatically ask if you want to save the questionnaire? As was the case with Summary Form 2 and Form A, selecting "Yes" indicates that you want to save the contents of the case, while selecting "No" indicates that you are not yet ready to save the case. Unlike with Summary Form 2 or Form A, you cannot partially save the questionnaire. This means that you have to finish entering an entire questionnaire before you close the data entry application. If you would like to take a break while entering Form B data, you can pause the entry program.

In add mode, after saving a case, CSPro assumes that you would like to add another case, and thus will take you to the beginning of a new questionnaire. If you are finished entering cases for the enumeration area, you can stop or close the data entry program. After modifying a case, however, the data entry program automatically goes into stop mode. From that mode, you can choose to modify another case, to add a new case to the data file, or to close the data entry program.

Chapter 2: Operational Control System

1. Introduction

All keyers entering data for the 2013 Cambodia Inter-Censal Population Survey will use an operational control system to work on entering the data captured on the three CIPS questionnaires. This system is used to ensure the quality of data entry and it is a useful tool for keyers to keep track of their individual assignments. Further, it allows supervisors to easily monitor the progress of each keyer and allows for the calculation of detailed metrics such as each keyer's production rates. To start the operational control system, double-click on the CIPS icon that is on your computer's desktop. The icon looks like a traffic light.

2. Entering Your Operator ID

Your data entry supervisor will assign you an operator ID. This ID is your keying name and it is used to keep track of your assignments. Using the correct name is important because it will ensure that you are paid correctly for your work. Enter your operator ID and then press enter.

MENU

Operator ID | op01

3. Starting Work on a New Assignment

If you do not have any pending work assignments, the first screen that you will see is the New Task Menu. Enter the geographic codes for the assignment that you have been given by your supervisor. If the code is valid, you will see the name of each geographic area appear as you enter the code.

NEW TASK MENU

KHET/ KRONG	SROK/ KHAND	KHUM/ SANGKAT	PHUM/ MONDOL	EA NO.
01	02	01	04	1

Khet / Krong
Banteay Meanchey

Srok / Khang
Mongkol Borei

Khum / Sangkat
Banteay Neang

Phum / Mondol
Kouk Pnov

After you have entered a valid geocode, you will see a list of tasks that you can perform on the enumeration area.
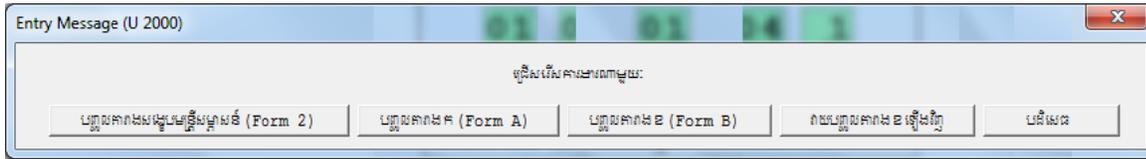
You can either:
- Start entering Summary Form 2 data for an enumeration area
- Start entering Form A data for an enumeration area
- Start entering Form B data for an enumeration area
- Start entering Form B data (for verification) for an enumeration area; your supervisor will indicate whether you should select Form B or Form B (Verify)
- Cancel and enter a new geocode

If you click on a button to begin an assignment, the operational control system will close and will open the data entry application for that task. For instructions on how to enter data for each task, see Chapters 3 - 5 of this manual.

4. Continuing Work on an Assignment

The next time you open the operational control system, you will be presented with the Tasks in Progress Menu, which shows a list of tasks that you have not submitted as complete.

The listing gives the geocodes of the enumeration area and a description of the task. It also lists the date that you last worked on the assignment. To continue working on a task, select the row number corresponding to that assignment. For example, in the above image, selecting 2 means that you want to continue working on Form 2 of the enumeration area in province 23. You will then see the following message:
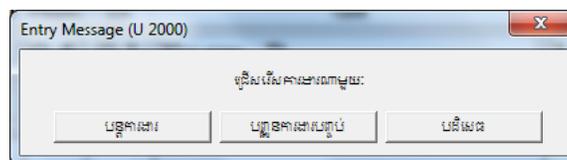
Select the "Continue Working" button to continue the assignment.

5. Submitting an Assignment as Complete

You are ready to submit an assignment as complete when you have finished entering all of the data for a given enumeration area. To submit a task as complete, your computer must be connected to the network because the program will copy the data files from your machine to the network. When the files are on the network, a supervisor can review your work. To submit the task, following the previously described instructions for continuing a task, but instead of choosing "Continue Working," click on the "Submit as Complete" button. You will receive an error message if the network is not functioning. In that case, notify your supervisor and try submitting the task at a later time. If the network is working, you will receive a confirmation message:
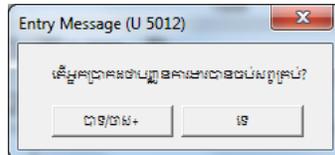
After selecting "Yes," the data files will be copied to the network and your task will no longer appear in the Tasks in Progress Menu. The operational control system will display the Submitted Tasks Menu, where you can view your completed assignments.

6. Navigating Between Different Sections

A navigation bar appears at the top of the operational control system that allows you to navigate between the different menus.
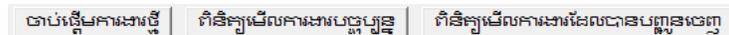
Clicking on the first button takes you to the New Task Menu. The second button takes you to the Tasks in Progress Menu. The third button takes you to the Submitted Tasks Menu. All three of these buttons may not appear at all times. For example, if you have no current assignments pending, you will not see the second button. If you have not submitted any tasks as complete, you will not see the third button.

7. Viewing Old Assignments

Using the corresponding navigation button, you can view the Submitted Tasks Menu. The listing on this page displays the enumeration area geocodes and a description of each task that you have submitted. It also lists the date that you submitted the assignment. This listing is mostly for your reference so that you have a record of your keying progress.

If, however, you accidentally submitted an assignment as complete, or your supervisor told you to recomplete the assignment, you may want to mark the task as no longer complete. In that case, type in

the row number corresponding to the assignment that you want to modify. You will then receive a confirmation notice:
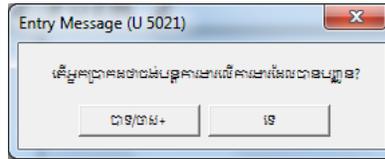
If you select "Yes," you will be directed to the Tasks in Progress Menu, where you can continue working on this assignment. After you have completed any modifications, you can submit the assignment as complete in the same manner that you would a task that had not been previously submitted.

Chapter 3: Summary Form 2

1. Introduction

The first questionnaires to be entered are the Summary Form 2 questionnaires, otherwise known as the enumerator's summary. This data is used for the timely release of the provisional survey results. A minimal amount of information will be entered, and the data entry program has a limited number of consistency checks.

2. Arranging and Entering the Questionnaires

Before you begin data entry, it is important to sort the Summary Form 2 questionnaires in a logical manner. You should sort forms the by page number so that the Building Number increases across forms.

One enumeration area makes up a case, which means that you will enter data one enumeration area at a time. After you have launched the data entry application by using the menu program, enter the data as it appears on the questionnaire. Once you have finished entering data for the entire enumeration area, press Control + / to indicate that the case is complete. To partially save the case, select "Save Partial Case" from the File menu, or press Control + R.

3. Multiple Households within One Building

Households are numbered within buildings. This implies that for every building the Household Number starts with code 01. Some buildings will consist of more than one household. In these cases, the Household Number is incremented by 1 and the Building Number remains the same. In such a case, you do not have to repeatedly enter the Building Number when entering data. You can simply press enter to leave it blank and to move on to entering the Household Number.

SUMMARY FORM 2. ENUMERATOR'S SUMMARY - Household Particulars

	Building (2)	Household (3)	Questionnaires (4)	Males (5)	Females (6)	Persons (7)
1	02,0	0,1	0,1	0,0,3	0,0,2	0,0,5
2		0,2	0,1	0,0,2	0,0,1	0,0,3
3		0,3	0,2	0,0,4	0,0,6	0,1,0
4	02,1	0,1	0,1	0,0,1	0,0,1	0,0,2
5	02,2	0,1	0,1	0,0,1	0,0,3	0,0,4

Building Number 20 contains three households

4. Locked Houses

Form 2 can also contain locked houses. These are houses that could not be contacted because the residents had moved out or because nobody was living there during the enumeration period. Such households are easily identified on a Summary Form 2 questionnaire because there is no information recoded for them. In addition, there will typically be a written explanation in the remarks column.

SUMMARY FORM 2. ENUMERATOR'S SUMMARY - Household Particulars

	Building (2)	Household (3)	Questionnaires (4)	Males (5)	Females (6)	Persons (7)
1	0,0,5	0,1	0,1	0,0,2	0,0,3	0,0,5
2	0,0,6					
3	0,0,7	0,1	0,1	0,0,3	0,0,4	0,0,7
4	0,0,8	0,1	0,2	0,0,5	0,0,4	0,0,9

Building Number 6 is a locked house

Information on locked houses should be entered. In order to enter a locked house, enter the Building Number and then, instead of entering a Household Number, simply press enter. CSPro will then skip to the next occurrence, leaving blank values for all questions except for the Building Number.

5. Page and EA Totals

The last two rows on every Summary Form 2 questionnaire are reserved for the Page Totals and the Enumeration Area Total. These total rows are not to be entered. During the tabulation stage of data processing, computer software will be used to calculate totals for various geographic areas.

6. Field Ranges

The following table summarizes the data that can be entered for Summary Form 2.

Field	From	To	Not Stated Code	Special
SFB2. Building Number	1	999		Blanks allowed
SFB3. Household Number	1	30		Blanks allowed
SFB4. Number of Questionnaires	1	98	99	
SFB5. Males	0	998	999	
SFB6. Females	0	998	999	
SFB7. Total Persons	1	998	999	

7. Skip Patterns

1) If Household Number is blank and Building Number is not blank, then CSPro assumes that you are entering a locked house and will skip to the next occurrence.

8. Consistency Checks

1) A Building Number must be specified for the first occurrence in an enumeration area.
2) You cannot repeat Building Numbers, except for cases of multiple households in one building.
3) When entering a locked house, you must specify a Building Number.
4) The first Household Number in every building must be 01.
5) You cannot repeat Household Numbers within a single building.
6) The count of Males and Females should equal the value entered for Total Persons.

Chapter 4: Form A

1. Introduction

The next questionnaires to be entered are the Form A questionnaires, otherwise known as the house listing. A minimal amount of information will be entered, and the data entry program has a limited number of consistency checks.

2. Arranging and Entering the Questionnaires

Before you begin data entry, it is important to sort the Form A questionnaires in a logical manner. You should sort forms the by page number so that the Building Number increases across forms.

One enumeration area makes up a case, which means that you will enter data one enumeration area at a time. After you have launched the data entry application by using the menu program, enter the data as it appears on the questionnaire. Once you have finished entering data for the entire enumeration area, press Control + / to indicate that the case is complete. To partially save the case, select "Save Partial Case" from the File menu, or press Control + R.

3. Multiple Households within One Building

Households are numbered within buildings. This implies that for every building the Household Number starts with code 01. Some buildings will consist of more than one household. In these cases, the Household Number is incremented by 1 and the Building Number remains the same. In such a case, you do not have to repeatedly enter the Building Number when entering data. You can simply press enter to leave it blank and to move on to entering the Household Number. CSPro will skip past the Wall Type, Root Type, Floor Type, and Purpose of Building questions.

FORM A. HOUSELIST - Building/Structure and Household Particulars

	Building (2)	Wall (3)	Roof (4)	Floor (5)	Purpose of Building (6)	Household Number (7)	Sex of Head (9)	Males (10)	Females (11)	Persons (12)	Selected Serial No. (14)
1	0,0,1	1	2	1	1	0,1	1	0,0,3	0,0,1	0,0,4	0,0,1
2						0,2	2	0,0,0	0,0,1	0,0,1	0,0,2
3						0,3	1	0,0,1	0,0,1	0,0,2	0,0,3
4	0,0,2	2	3	1	1	0,1	1	0,0,2	0,0,2	0,0,4	0,0,4

Building Number 1 contains three households

4. Locked Houses

Form A can also contain locked houses. These are houses that could not be contacted because the residents had moved out or because nobody was living there during the enumeration period. Such households are easily identified on a Form A questionnaire because there is little information recoded for them. In addition, there will typically be a written explanation in the remarks column.

FORM A. HOUSELIST - Building/Structure and Household Particulars

	Building (2)	Wall (3)	Roof (4)	Floor (5)	Purpose of Building (6)	Household Number (7)	Sex of Head (9)	Males (10)	Females (11)	Persons (12)	Selected Serial No. (14)
1	0,1,9	3	2	3	1	0,1	1	0,0,1	0,0,2	0,0,3	0,2,1
2	0,2,0										0,2,2
3	0,2,1	1	1	5	2	0,1	2	0,0,0	0,0,1	0,0,1	0,2,3
4	0,2,2										
5	0,2,3	2	3	1	3	0,1	1	0,0,4	0,0,5	0,0,9	0,2,4

Building Numbers 20 and 22 are locked houses; the Serial Number of Selected Household is filled for one and left blank for the other

Information on locked houses should be entered. In order to enter a locked house, enter the Building Number and then, instead of entering a Wall Type, simply press enter. CSPro will skip to the Household Number. Again, simply press enter. CSPro will then skip to the Serial Number of Selected Household. If a value for this field is listed on the questionnaire, enter it; if not, press enter to move to the next occurrence.

5. Page Totals

The last row on every Form A questionnaire contains total counts of households and persons. These total values are not to be entered. During the tabulation of data processing stage, computer software will be used to calculate totals for various geographic areas.

6. Field Ranges

The following table summarizes the data that can be entered for Form A.

Field	From	To	Not Stated Code	Special
H2. Building Number	1	999		Blanks allowed
H3. Wall Type	1	8	9	
H4. Roof Type	1	8	9	
H5. Floor Type	1	8	9	
H6. Purpose of Building	1	4	9	
H7. Household Number	1	30		Blanks allowed
H9. Head Sex	1	2	9	
H10. Males	0	998	999	
H11. Females	0	998	999	
H12. Total Persons	1	998	999	
H14. Serial Number of Selected Household	1	999		Blanks allowed

7. Skip Patterns

1) If entering information for a household in a building that already has been entered (the Building Number repeats, or is blank), CSPro will skip from Building Number to Household Number.
2) If Wall Type is blank, CSPro will skip to Household Number, anticipating that you are entering a locked house.

3) If Household Number is blank and Building Number is not blank, then CSPro assumes that you are entering a locked house and will skip to the Serial Number of Selected Household.

8. Consistency Checks

1) A Building Number must be specified for the first occurrence in an enumeration area.
2) You cannot repeat Building Numbers, except for cases of multiple households in one building.
3) You must specify a Wall Type, Roof Type, Floor Type, and Purpose of Building for the first household in a building.
4) When entering a locked house, you must specify a Building Number.
5) The first Household Number in every building must be 01.
6) You cannot repeat Household Numbers within a single building.
7) The count of Males and Females should equal the value entered for Total Persons.
8) Each Serial Number of Selected Household must be greater than all previously entered numbers.

Chapter 5: Form B

1. Introduction

The next questionnaires to be entered are the Form A questionnaires, otherwise known as the house listing. A minimal amount of information will be entered, and the data entry program has a limited number of consistency checks.

The bulk of data entry for CIPS 2013 consists of the entry of Form B questionnaires. Form B is the main survey questionnaire, conducted at each sampled household level. The form is divided into five parts. Part 1 of the questionnaire consists of identifying details for the household, as well as summary information for all the people living in the household at the time of the survey, as well as usual members who were absent at that time. Part 2 contains questions asked of each person who was living in the household at the time of the survey. Part 3 contains questions on fertility that are asked of women aged 15 and over. Part 4 covers questions asked about people who died in the household in the last year. The last section, Part 5, contains questions about housing conditions and asset ownership.

2. Arranging and Entering the Questionnaires

Before you begin data entry, it is important to sort the Form B questionnaires in a logical manner. Some households consist of more than 10 people. In this case, multiple forms will be used for one household and you should sort the forms by the number on the bottom-left of the cover sheet (Number of Form B) so that this number increases across forms.

One household makes up a case and you will enter data one household at a time. One enumeration area is comprised of many households. After you have launched the data entry application by using the menu program, enter the data as it appears on the questionnaires. When you have finished entering data for a household, you will automatically be prompted to save the case. When you want to take a break, finish entering data for the household and then close the data entry program. You can continue adding households at a later point. The File Tree on the left side of CSPro window gives the name of each case in the data file. The name is in the following format:

        <khet><srok><khum><phum><ea><building number><household number><urban/rural code>

If you want to modify a case, you can double click on the name in the File Tree. The values of Khet to EA will be the same for a data file, as will the Urban/Rural code. The image highlights the location in the name where the Building Number and the Household Number are. Looking only at these parts of the name, at the right side at the key, will help you find the appropriate case to modify.
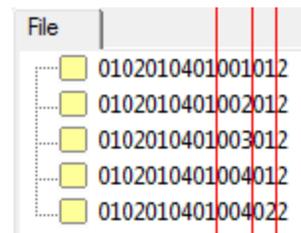
3. Automatically Scrolling Rosters

The roster for Part 2 (the questions about individuals in the household) is too large to fit on one screen. As you enter data, CSPro will automatically scroll horizontally to the right, and when you have completed entering data for that row, it will scroll back to the left. You do not have to use the mouse to move the scrollbars.

The Form B rosters display 7, 5, or 10 rows at a time. It is possible, however, to enter more occurrences than these numbers. CSPro will automatically scroll vertically downward, revealing more rows where you can enter data.

3. Automatic Sizing of Roster

For some of the rosters, the data entry program controls the number of rows displayed. The following table describes how the size of a roster is controlled.

Roster	How the number of rows is determined…
Statement 1.1: Usual Members Present	You must manually leave this roster by pressing Control + /
Statement 1.2: Visitors President	You must manually leave this roster by pressing Control + /
Statement 1.3: Usual Members Absent	You must manually leave this roster by pressing Control + /
Part 2: Individual Particulars	Automatically determined based on the value of the field Total Number of Persons in Statements 1.1 & 1.2
Part 3: Fertility Information	Automatically determined based on the number of women aged 15 and over in the household
Part 4: Deaths in Household	Automatically determined by the value of the field Total Number of Deaths

If there are too few, or too many, rows in the roster as compared to the information on the questionnaire, it means that you have either entered data incorrectly, or there may be a mistake in the questionnaire. If you entered data incorrectly, make the appropriate changes in CSPro. If the mistake is on the questionnaire itself, contact your supervisor, who can send the questionnaire to the manual editing team.

4. Verifying Form B Data

Some questionnaires for Form B will be entered twice. This process is called data verification. There are two kinds of verification: dependent and independent verification. In dependent verification, a second keyer enters data using the original data file as a reference file. In independent verification, two keyers enter data separately, and a third person resolves any differences between the data files. CIPS 2013 data will be entered using independent verification. As a keyer, even if you are told that you are verifying data, enter it just as you would any Form B questionnaires. Your tasks do not change. The verification checks will be done at the supervisory level.

5. Cover Form 1

5.1. Field Ranges

The following table summarizes the data that can be entered for the first cover form.

Field	From	To	Not Stated Code	Special
C6. Building Number	1	999		
C7. Household Number	1	99		
C9. Serial Number of Selected Household	1	999		

5.2. Skip Patterns

There are no skip patterns for this section.

5.3. Consistency Checks

1) The Building Number and Household Number combination must be unique across all cases added to the data file. If you enter a duplicate combination, you will see an error message similar to this:

> **Case ids '0102010401001012' duplicate an existing case! Case ids must be unique.**
> Press F8 to clear.   Message 92101

6. Cover Form 2

6.1. Field Ranges

The following table summarizes the data that can be entered for the second cover form.

Field	From	To	Not Stated Code	Special
C1.1.3 Relationship	1	15	99	
C1.1.4 Sex	1	2		
C2.1.3 Relationship	1	15	99	
C2.1.4 Sex	1	2		
C2.1.5 Usual Residence	Multiple codes		9999	
C3.1.3 Relationship	1	15	99	
C3.1.4 Sex	1	2		
C3.1.5 Age	0	98	99	
C3.1.6 Survey Night Location	Multiple codes		9999	
C3.1.8 Length of Absence	0	998	999	
Total Usual Members	0	99		
Total Visitors	0	99		
Total Persons	0	99		

6.2. Skip Patterns

There are no skip patterns for this section.

6.3. Consistency Checks

1) Total Usual Members must equal the number of rows entered in Statement 1.1.
2) Total Visitors must equal the number of rows entered in Statement 1.2.
3) Total Persons must equal the sum of Total Usual Members and Total Visitors.

7. Part 2: Individual Particulars

7.1. Field Ranges

The following table summarizes the data that can be entered for Part 2.

Field	From	To	Not Stated Code	Special
P03. Relationship	1	15	99	
P04. Sex	1	2		
P05. Age	0	98	99	
P06. Mother Alive	1	3	9	
P07. Living with Mother	0	98	99	
P08. Marital Status	1	5	9	
P09. Age at First Marriage	9	98	99	
P10. Mother Tongue	1	33	99	
P11. Religion	1	4	9	
P12. Birth Place	Multiple codes		9999	
P13. Previous Residence	Multiple codes		9999	
P14. Duration of Stay	0	98	99	
P15. Reason for Migration	1	12	99	
P16A. Literacy (Khmer)	1	2	9	
P16B. Literacy (Other)	1	9	0	
P17A. Attended School	1	3	9	
P17B. Grade Currently Attending	0	20	99	
P17C. Highest Grade Completed	0	20	99	88 also
P17D. Main Subject of Study	1	101	999	
P18. Disability	0	8	9	
P18. Disability (Multiple)	1	7	9	Blanks allowed
P19. Main Activity	1	8	9	
P20. Employment Period	0	12	99	
P21. Occupation	Multiple codes		999	
P22. Employment Status	1	5	9	
P23. Industry	Multiple codes			
P24. Employment Sector	1	8	9	
P25. Secondary Economic Activity	1	11	99	

7.2. Skip Patterns

1) If a person is aged 15 or over, then Living with Mother is skipped.
2) If a person does not have a Mother Alive code of Yes (1), then Living with Mother is skipped.
3) Age at First Marriage is skipped if Marital Status is Never Married (1).
4) If Previous Residence is Same Village (1), then Duration of Stay and Reason for Migration are skipped.
5) If Attended Schools is Never (1), then the remaining P17 questions are skipped.
6) If Attended Schools is Past (3), then Grade Currently Attending is skipped.
7) If neither Grade Currently Attending or Highest Grade Completed are between 15-20, then Main Subject of Study is skipped.

8) Is Disability is not Multiple (8), then Disability (Multiple) is skipped.
9) If Main Activity is not Employed (1) or Unemployed (Previously Worked) (2), then CSPro will skip to Secondary Economic Activity.

7.3. Consistency Checks

1) The number of rows entered must match the value of Total Persons.
2) The Relationships and Sexes entered must match the Relationships and Sexes entered in Statements 1.1 and 1.2.
3) The Relationship of the first person entered must be Head of Household (1).
4) Each case can only have one Head of Household.
5) Relationship cannot be Spouse (2) unless the Head of Household's Marital Status is Married (2).
6) A Spouse must have the opposite Sex of the Head of Household.
7) A Head of Household must be at least 12 years-old.
8) A Child must be at least 12 years younger than the Head of Household.
9) A Parent must be at least 12 years older than the Head of Household.
10) A Grandchild must be at least 24 years younger than the Head of Household.
11) Living with Mother must point to a row with information for a woman who is at least 12 years older.
12) A Spouse must have a Marital Status of Married (2).
13) Duration of Stay cannot be greater than Age.
14) Grade Currently Attending, if it exists, must be greater than Highest Grade Completed (unless Highest Grade Completed is 20 or 88).

8. Part 3: Fertility Information

8.1. Field Ranges
The following table summarizes the data that can be entered for Part 3.

Field	From	To	Not Stated Code	Special
F3. Woman's Serial Number from Part 2	1	999		
F4. Age of Woman at First Birth	12	49	99	0 or blank if no child
F5A. Males Born	0	20	99	
F5B. Females Born	0	20	99	
F6A. Males Alive	0	20	99	
F6B. Females Alive	0	20	99	
F7A. Males Dead	0	20	99	
F7B. Females Dead	0	20	99	
F8A. Males Born Last Year	0	4	9	
F8B. Females Born Last Year	0	4	9	
F9. Delivery Assistance	1	6	9	
F10. Birth Registered	1	2	9	

8.2. Skip Patterns

1) If the woman is not between the ages of 15-49, CSPro will skip to the next row after the Females Dead question (skipping past the questions about a birth in the last year).
2) If the sum of Males Born Last Year and Females Born Last Year is 0, then the questions on Delivery Assistance and Birth Registered will be skipped.

8.3. Consistency Checks

1) The number of rows entered must match the number of women aged 15 and over that were recorded in Part 2.
2) The Woman's Serial Number from Part 2 must point to a row in Part 2 with information for a women aged 15 and over.
3) If a woman has had a child, then the Age of Woman at First Birth must be less than or equal to her Age recorded in Part 2.
4) If the woman has not had a child (Age of Woman at First Birth is 0 or blank), then Males Born and Females Born must both be 0.
5) The sum of Males Born and Females Born must not exceed 20.
6) The number of Males Alive cannot exceed Males Born; Females Alive cannot exceed Females Born.
7) The number of Males Dead cannot exceed Males Born; Females Dead cannot exceed Females Born.
8) The sum of Males Alive and Males Dead should equal Males Born; the sum of Females Alive and Females Dead should equal Females Born.
9) The number of Males Born Last Year cannot exceed Males Born; Females Born Last Year cannot exceed Females Born.

9. Part 4: Deaths in Household

9.1. Field Ranges

The following table summarizes the data that can be entered for Part 4.

Field	From	To	Not Stated Code	Special
Deaths in Household	0	99		
D3. Sex	1	2		
D4. Relationship	1	15	99	
D5. Age at Death	0	98	99	
D6. Cause of Death	1	16	99	
D7. Death Registered	1	2	9	
D8A. Died During Pregnancy	1	2	9	
D8B. Death Location	1	4	9	
D8C. Death Attendance	1	6	9	

9.2. Skip Patterns

1) For all males and for females not in the ages of 15-49, CSPro will skip the D8 questions, jumping from the Death Registered question to the next row.
2) If Died During Pregnancy is not Yes (1), then CSPro will skip past the Death Location and Death Attendance questions to the next row.

9.3. Consistency Checks

1) The number of rows entered must match the value of Deaths in Household.
2) The Cause of Death can only be Pregnancy Complications (9) or Delivery Complications (10) for a female aged 12 and over.

10. Part 5: Household Information

10.1. Field Ranges

The following table summarizes the data that can be entered for Part 5.

Field	From	To	Not Stated Code	Special
H01. Dwelling Type	1	4	9	
H02. Light	1	7	9	
H03. Fuel	1	7	9	
H04. Toilet	1	5	9	
H05. Water	1	8	9	
H06. Water Location	1	3	9	
H07. Number of Rooms	1	8	9	
H08. Separate Kitchen	1	2	9	
H09. Radio	0	10	99	
H10. Television	0	10	99	
H11. Telephone	0	10	99	
H12. Cell Phone	0	10	99	
H13. Computer	0	10	99	
H14. Bicycle	0	10	99	
H15. Motorcycle	0	10	99	
H16. Refrigerator	0	10	99	
H17. Washing Machine	0	10	99	
H18. Air-Conditioner	0	10	99	
H19. Fan	0	10	99	
H20. Car	0	10	99	
H21. Boat	0	10	99	
H22A. Tractor	0	10	99	
H22B. Koyaon	0	10	99	
H23. Internet (Home)	1	2	9	
H24. Internet (Outside)	1	2	9	
H25. Internet (Home & Outside)	1	2	9	

10.2. Skip Patterns
There are no skip patterns for this section.

10.3. Consistency Checks
1) If Internet Use at Home (H23) is Yes, Internet Use Outside Home (H24) cannot also be Yes.
2) If Internet Use at Home (H23) is Yes or Internet Use Outside Home (H24) is Yes, Internet Use at Home and Outside Home (H25) cannot be Yes.

Chapter 6: Operational Control System (for Supervisors)

1. Introduction

There is a hidden area of the operational control system that is intended for tasks that only supervisors will execute. To visit this section of the operational control system, hold down the Control, Alt, and Shift keys while pressing the S (for supervisor) button. You cannot go to the Supervisor Menu from the operator ID login page. Only after the keyer has logged into the system will the Control+Alt+Shift+S key combination work.

```
                        SUPERVISOR MENU

          1 - Change Language of Message Files
          2 - Remove Task from Operator's Work
          3 - Copy Files from Server


          Select a task          [   ]


    Khet        Srok        Khum        Phum        EA

   [    ]      [    ]      [    ]      [    ]      [    ]


          Actions:   1 - Form 2
             [  ]    2 - Form A
                     3 - Form B
                     4 - Form B (Verify)
```

Once at the Supervisor Menu, you have three tasks choose from. By pressing 1 you can change the language of the messages; pressing 2 allows you to remove an assignment from the keyer's workload; pressing 3 allows you to copy data files from the network to the local computer.

2. Modifying the Language of Messages

Each data entry application (Summary Form 2, Form A, and Form B), as well as the operational control system, is available in two languages: Khmer and English. A message will appear prompting you to choose which language to set the messages. This setting only affects the computer programs on the local computer; it will not any settings on the network. While the option does change the language of the operational control system, that change will only reflected after the program has been closed and restarted.

3. Removing an Enumerator's Assignments

If a keyer started working on an enumeration area and it later determined that the keyer entered the wrong geocode, or the task is reassigned, you may want to remove the assignment from showing up in the keyers list of tasks in progress. Entering the geocode of the enumeration area and the task number will remove the assignment from the keyer's lists.

4. Copying Files from the Network

If you want to reassign a task from one keyer to another, you can use this option. First, have the initial keyer submit the task as complete. This will copy the data files from that keyer's machine and place them on the server. Next, go to the next keyer's computer and go to the Supervisor Menu. Choose this

option and then enter the geocode of the enumeration area, as well as the task number. If the files exist on the network (also known as the server), they will be copied to the local computer. Then, from the New Task Menu, the keyer can enter the information about this task. When the appropriate data entry opens, the keyer must only start entering data from the point where the initial keyer stopped.

5. Network File Structure

On the network there are a few folders:

- **Actions**: This folder contains copies of the "actions" file. The actions file describes each keyer's workload. The file is stored on each keyer's local computer but is copied to the network every time that the keyer starts the operational control system (and the network connection is active). The actions folder contains the most recent copy of this file. Old versions of the file are stored in the **Actions\Backups** folder.
- **Data**: This folder contains subfolders that will contain the submitted data files, organized by the kind of questionnaire entered. The **Data\Backups** folder contains backups of the data file with a date and time stamp indicating when the keyer started work on the file. Every time the keyer works on an assignment, a copy of the data file is created on the network (if the network connection is active).
- **Logs**: This folder contains subfolders that will contain the submitted log (operator statistics) files, organized by the kind of questionnaire entered.
- **Programs**: This folder contains the programs needed to enter data for the CIPS survey. The folder also contains the operator control system program, as well as a geography lookup file that contains information about which enumeration areas were part of the CIPS sample.

6. Pushing Program Updates from the Network

The root of the network contains a file called NetworkAccessTest.txt. The operational control system tries to locate this file to determine if a network connection is available. The contents of the file contain the version number of the programs. If you make a modification to the programs and you want to push these updates to all of the keyers' computers, you should increment the number in the NetworkAccessTest.txt file. Furthermore, you must edit the operational control system program and modify the value of "numeric thisProgramsVersion" to match the number that you enter in the file. The next time that the network connection is active and the keyer opens the operational control system, that files on the local computer will be updated.

7. Local Computer File Structure

On the local computer there are a few folders that match the folders in the **Programs** folder on the network. These are the **Dicts**, **Form 2**, **Form A**, **Form B**, **Lookup,** and **Menu** folders. In addition to these folders there is a **Data** folder.

The **Data** folder contains all of the data files for assignments that have been entered on the local computer. For every data file, CSEntry creates an additional five files:

.idx	Index
.log	Operator statistics
.lst	Listing file with results of data entry
.not	Notes (entered by the keyer)
.sts	Status file, listing information about what cases have been verified or partially entered

All of these files have a purpose, but for CIPS only the .dat (data file) and the .log (operator statistics) files will be retained and copied to the network on completion of an assignment. The remaining files will exist only on the local computer.

There are two subfolders in this folder:

- **Data\Backups**: This folder contains backups of the data file. Each data file has a date and time stamp, and a backup is created every time the keyer begins or continues work on an assignment. If a data file becomes corrupt at some point, you can rollback to previous work by finding the more recent non-corrupt file in this folder.
- **Data\Menu**: This folder is used to store data used by the operational control system. It contains the actions file for each keyer using the local computer. The actions file describes each keyer's workload. If this file becomes corrupt, you can rollback to a previous version by retrieving the corresponding file from the **Actions** folder on the network. In addition to the actions file, this folder contains .pff files generated by the operational control system. CSEntry uses these files to determine what program to display to the keyer, what to name the data files, and what geocodes to assign to the batch. These .pff files, along with the files with the prefix "junk," are all temporary files and can be safely deleted.

8. File Naming Scheme

The operational control system creates data files using the following scheme:

	<type of application>	*_<khet><srok><khum><phum><ea>.*	*<file extension>*
Summary Form 2	Form2		.dat
Form A	FormA		.dat
Form B	FormB		.dat
Form B (Verify)	FormB		.ver

For example, the file with Form A data for Kampong Cham (3), Dambae (4), Seda (5), Krasang (4), EA (1) would be named FormA_0304050401.dat.