1. **Introduction into CAPI**

Computer-assisted personal interviewing (CAPI) refers to survey data collection by an in-person interviewer (i.e. face-to-face interviewing) who uses a computer to administer the questionnaire to the respondent and captures the answers onto the computer.

CSPro is a free software package used by hundreds of organizations and tens of thousands of individuals for entering, editing, tabulating, and disseminating census and survey data. CSPro is designed to be as user-friendly and easy to use as possible, yet powerful enough to handle the most complex applications. It can be used by a wide range of people, from non-technical staff assistants to senior demographers and programmers. The funding for CSPro comes from USAID. Additional information on CAPI is available on the US Census Bureau website.

The CAPI for the Multiple Indicator Survey on Ageing in sub-Saharan Africa has been programmed by Mr. David Beckles, project consultant.

Useful links and addresses

- U.S. Census Bureau website: http://www.census.gov/ipc/www/capro
- CSPro Users website: http://www.csprousers.org

2. **CAPI Application**

2.1 **Overview of the basic functionalities of the tablet**
- Unlocking the screen/logging-in: entering username/password
- Maintaining tablet/charging tablet
- Using of technical devices (dongles, etc)
- Scrolling/zooming
- Home button

3. **Surveys using CAPI - Enumerators**

3.1 ** Enumerator's assignment list**

Once logged in, the enumerator assignment list displays operations assigned to that enumerator by the NSO/team-leader. Listings are sorted (how?). Households are identified and located. Individual assignment lists password protected?

3.2 **Accessing households on CAPI: Loading the survey:**
- Accessing CAPI & opening applications in CAPI
- Start page for household interview
- Start page for individual interview

3.3 **Locating households using GPS/maps/info collected during listing**

3.4 **Internet access/use of blue-tooth in the field (use of dongles, etc.)/network status**
3.5 Locating households in the field using GPS codes collected during listing/without GPS codes (maps?)
3.6 Moving within CAPI (moving back & forth in the questionnaire – possible?)
3.7 Saving interviews for review/save for continuation
3.8 Uploading completed interviews to team-leader’s tablet/laptop for review
3.9 Correcting errors
3.10 Re-scheduling interviews (correspondence with team-leader)
3.11 Logging out at the end of a field day & closing CAPI

4. Surveys using CAPI – Team-leaders
The team-leader’s assignment list is different from the enumerator listing as it includes the number of assignments per enumerator and a possibly unassigned category. The listing also shows the number of interviews to be reviewed, completed, incomplete and (to be) re-scheduled.

4.1 Opening screen for team-leader & review menu for team-leader
4.2 Assigning/re-assigning/re-scheduling interview
4.3 Reviewing completed interviews & save completed interviews
4.4 Correcting errors in reviewed interviews
4.5 Checking/re-interviewing completed interviews
4.6 Uploading completed interviews to NSO server
4.7 Team-leader’s control over the field

5. Surveys using CAPI – Field-supervisors
5.1 Opening screen for field-supervisors
5.2 Field-supervisor’s control over the field (over the team-leaders)
5.3 ........

6. CAPI live & CAPI training application (tbd)

6.1 CAPI training
CAPI training performs the same as CAPI. The main difference is that CAPI training is for practice and pre-test purpose, while CAPI is for live data collection. Enumerators should always make sure to log into CAPI training when practicing – otherwise they send inadvertently practice data as live data.

To activate CAPI training, tap on the CAPI training icon. To activate live CAPI, tap on the CAPI icon.

The following log-in screen appears:

Enter the x-letter username and the x digit password by tapping inside each box and typing in the keyboard, which appears. Then tap ‘submit’. An error message appears if an incorrect username and/or password is entered. Correct the mistake and enter the correct username/password and tap ‘submit’.

6.2 CAPI live data collection
The CAPI icon is used to access the assignments during the field period. Assignments will display once NSO/team-leader (tbd) loads them to CAPI. Enumerators will receive the list of their assignments (tbd) from the team-leader. The team-leader will receive the assignments for his team from the NSO (how??) (see item 2)
The team-leader's assignment list is different from the enumerator listing as it includes the number of assignments per enumerator and a possibly unassigned category. The listing also shows the number of interviews to be reviewed, completed, incomplete and (to be) re-scheduled.
7. General navigation through the questionnaire using CAPI (tbd David)

7.1 Field notes

(David question: will these icons be available in the final version?)

Selecting and clicking on the icon for ‘field notes’:

A text field opens for the interviewer to provide ‘field notes’, i.e. important information regarding the interview/ the specific question. Field notes can be added to all questions throughout the interview. They provide critical information to better understand the responses provided and/or report on any specific conditions/occurrences during the interview that provide the context to the information gathered.

7.2 Interrupt interview

Selecting and clicking on the icon for ‘interrupt interview’:
Opens the following screen and provides the interviewer with the following options:

Selecting 'quit' opens the following menu on the screen:

Selecting 'Go To', the following menu becomes available:
(tbd how the questionnaire can be navigated by the interviewer using this menu)
Clicking on any of the sections listed, moves the interviewer to the selected section (tbc); Clicking on ‘continue in current field’ returns you to the interview.

7.3  Navigation within the questionnaire in CAPI

To navigate the questionnaire, CAPI requires the interviewer to select an answer/or select ‘continue’ as presented in the image below:

select ‘continue’: Select ‘continue’ as follows:

and click on the arrow next to the question/instruction:
8. **Types of questions**

This survey uses three types of questions:

**Type 1:** a number needs to be entered into a field provided by CAPI:

**Type 2:** a text needs to be entered into the field provided by CAPI:
Type 3: Select one response from several options

Type 4: Select at least one response (check all that apply) from several options
Category 'other': field for additional information to be entered into the system

The majority of the closed questions (questions that provided a selection of responses) in the survey provide an option ‘other’ to provide additional information and/or to provide an additional response category that has not been captured by the responses offered.

Selecting ‘other’ and clicking on the right arrow next to the question will provide a text-field (see below) to enter the relevant information. When finishing with entering the information, click ‘ok’ and CAPI will move on to the next question.
9. Consistency checks

CAPI has a series of built-in consistency checks that allow the system to reduce errors when entering data and alerts the interviewer when erroneous information has been provided with an error message that returns the user to the question to review and revise the response/s provided accordingly. The following provides examples of in-built CAPI consistency checks and related error messages.

9.1 Incomplete response

In the present design of CAPI, a response is required for all questions. In case an interviewer attempts to advance without providing a response, the following error message appears on the screen:

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WARNING: Out of range! Please enter a valid value for H19
```

This requests the interviewer to click on 'ok' to return to the question to provide a response. For any question a respondent is not able to answer, because he/she doesn't know, select 'DK' (which stands for 'don't know'). For any question the respondent refuses to provide an answer, select 'RF' (which stands for 'refused') and proceed to the next question.

9.2 Inconsistent responses

For questions that allow the selection of several responses, CAPI has built-in consistency checks to reduce possible errors that can be either due to inconsistency in the response pattern of a respondent and/or typos of the interviewer. The following image provides an example of inconsistent responses selected: the response categories 'Don't now' and 'Refused' cannot be selected with any other response category:
Should the interviewer try to enter an inconsistent selection of responses, CAPI will trigger the following error message:

**Message (-1080)**

If any one of the options 'A No toilet facility', '8 DK', or '9 RF' is selected then no other options may be selected.

OK

Clicking on 'ok' the interviewer is returned to the question to review and revise the responses accordingly.

9.3 Inconsistent information provided

Example 1:
The following screenshot provides an example of a question for which an incorrect (inconsistent) response was provided: In this situation, two individuals (instead of one) were designated head of household by the interviewer. Given that only one individual can be designated head of household of any given household, CAPI triggers the following error message:
Click on ‘ok’ and CAPI returns to the question in order for the interviewer to review and revise the information provided.

Example 2:

The interviewer has provided an inconsistent response as follows (after providing income information to earlier questions):
CAPI triggers the following error message:

**Message (-1454)**

If H11 is 'None' then there must be no income given in any of questions H12 to H10.

OK

Clicking 'ok' returns the interviewer to the question to review and revise the response provided accordingly and in consistence with earlier responses provided

### 9.4 Provision of (number) ranges

In order to reduce the risk of typos and respondent's errors/inconsistencies, CAPI provides ranges for numeric information, such as age of the respondent (in this example), to be entered. Any number entered that is outside that given range will trigger an error message and will return the interviewer to the question to review and revise the response accordingly.
The following image demonstrates how the interviewer can review the age range provided: Click on the icon within the (red) circle and CAPI will display the range within which the response needs to be (0-105 years of age). Should the respondent either not know his age, select 'DK' for don’t know’ or should he/she refuse to provide the age-information, select ‘RF’ for ‘refused’.

10. **Interviewer instructions**

CAPI provides interviewer instructions at the beginning of each substantive section and/or along with specific questions as necessary. These instructions provide guidance to the interviewer to explain/clarify the matter and/or to provide guidance to the interviewer as to how to handle a certain topic and/or question.

There are two types of interviewer instructions:

**Type 1: ‘Interviewer to read’ instructions:** these instructions need to be read out loud to the respondent as provided:
**Type 2: ‘Interviewer’**: these are guidance notes for the interviewer (these are *not* to be read aloud to the respondent):

<table>
<thead>
<tr>
<th>Region</th>
<th>District</th>
<th>TA/Ward</th>
<th>Enumeration area</th>
<th>Household number</th>
<th>Interview start date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 - Central</td>
<td>Zingwwe Rural</td>
<td>1-1</td>
<td>118- SA116</td>
<td>15</td>
<td>DDMYYMM</td>
</tr>
</tbody>
</table>

**Cover Sheet Screening for Eligibility**

[Interviewer to read: We are currently undertaking a study on the living conditions of older persons 60 years and older in Malawi. We are planning to collect information on issues such as health, lifestyle, financial and family situation of the household and individuals 60 years and over who are members of this household. I need first to determine the eligibility of members of your household to participate in the study, i.e. that your household has at least one member who meets the age criteria, i.e. being 60 years or older.]

To proceed select ‘Continue’.  

Continue

**Start Financial Assets**

[Interviewer: The questions being asked are: ]

**HA2a.** Do you or members of your household currently own any of the following financial assets?

**HA2a.1.** What is the approximate current total value of these assets?

where * is a letter from ‘a’ to ‘f’.

If respondent reports 0 items owned by the household, write “0” in the respective field.

When you respond, please make sure to include all assets owned by the household. This

Continue
11. Guidance on selected questions

11.1 Household listing (household questionnaire)
An area of critical importance for the survey is completion of the household listing. The household listing starts with listing all members of the household (according to the guidelines provided in the interviewer manual). Of critical importance is the complete listing of household members age 60 years and older. In order to list all individuals in this age-group CAPI provides the following question to allow the interviewer to list all age-eligible individuals in the household (according to the guidelines provided in the interviewer manual):

Select ‘yes’ and click on the arrow to the right of the question to proceed to the follow-up question that collects the name of that individual. Upon completion of entering the name/s of this age-eligible
individual, CAPI returns to the screen above. Select ‘Yes’ if there are additional eligible household members and ‘No’ if there are no more additional eligible individuals.

11.2 Access to water and time to get it

The survey assesses the time needed to collect water (question HE8c: how long does it take?). The first screen collects the info in hours: select ‘0’ hours if it takes less than one hour. Select the appropriate number for the number of hours it takes to collect water. Then click on the arrow on the right side of the question to advance to the next question that collects the minutes needed (in addition to the hour/s or if the time is less than one hour).

and then provide the time in minutes accordingly: