

## Topic: Field Reengineering

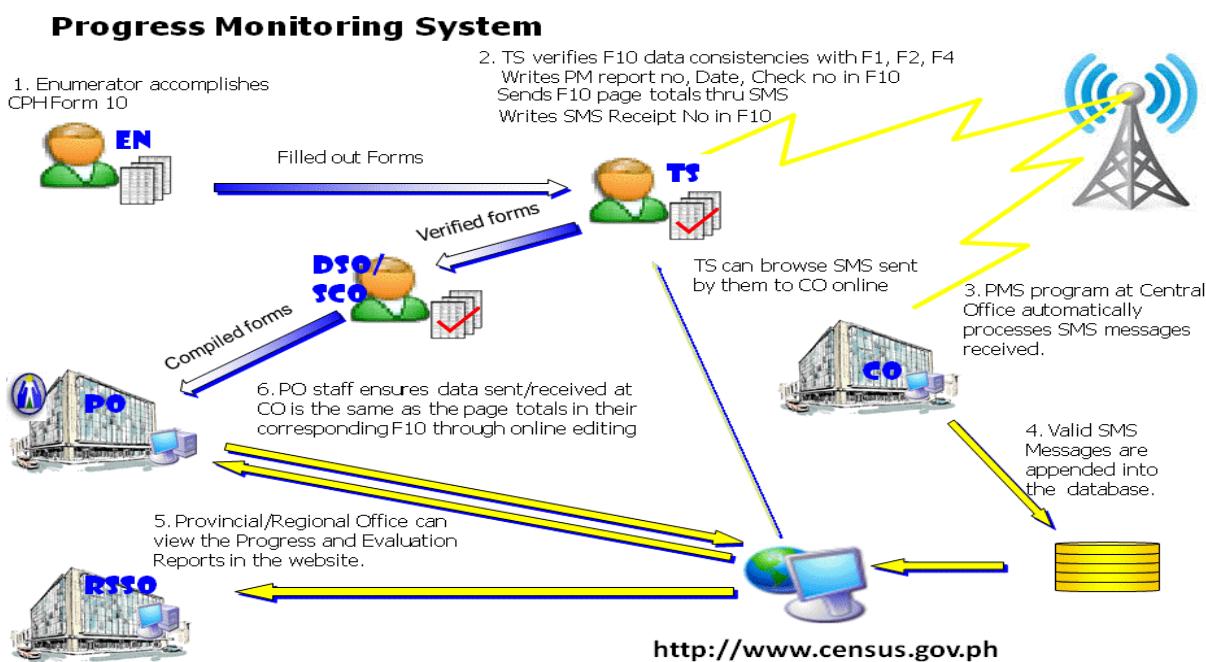
# Progress Monitoring thru Text Messages (SMS)

## I. Introduction

The listing/enumeration during the Census is expected to last for a month. During this period, the PSA management should be apprised of the progress of field operations that is as current as possible. Specifically, this system will be used to monitor the progress of field operations at the national, regional, provincial, city/municipality, barangay, or enumeration area (EA) level by the Central, Regional, and Provincial Offices. Offshoot to this progress monitoring system is enabling the provincial office to detect under coverage or deliberate over-coverage (possible padding!) in areas under their jurisdiction as soon as enumeration in the area has been reported as completed.

This paper presents the flow of Progress Monitoring (PM) through Short Message Service (SMS) or text messaging and the procedure for sending the summary of the accomplishment of each enumerator to the Progress Monitoring System (PMS) installed at the central office. The process starts with the preparation of EN's Accomplishment Report (CPF-10) by the enumerator which is the system's main source of data and ends once the report has been verified and confirmed to be correct by the designated staff at the provincial office (PO).

The team supervisor (TS) will collect the filled out CP form 10 from each enumerator under his/her supervision at least once a week. The page totals in the forms will be sent by the TS to the central office by texting the data. These data are the number of households that have been enumerated during the report's period covered, total population in these households, and the current status (either on-going or completed) of the field enumeration in the EA.



## II. DATA AND DOCUMENT FLOW

The flow of data and documents that will be used as main source of data for the monitoring of the progress of enumeration is described below:

1. The EN prepares Accomplishment Report (CPF-10) based on the entries in Listing Form (CPF-1) on a daily basis. Correctness of entries in CPF-1 are reviewed by matching with the entries in their respective main census forms, these are Household Questionnaire (CPF-2 or CPF-3) or Institutional Questionnaire (CPF-4).
2. The EN submits CPF-10 together with the accomplished CPF-2 or CPF-3 and CP Form 4 to the TS every Wednesday.
3. The TS ensures the correctness of entries in CPF-10 by checking the consistency of entries in this form with the entries in corresponding CPF- 1, CPF-2 or CPF-3, and CPF-4. After verification, the TS returns the accomplished CPF-1 to the EN.
4. The TS fills out required data items found at the upper right portion of the accomplished CPF-10. These are the PM Report No., Date Sent, Check No., and SMS Receipt No.
  - The TS writes inside the box for PM Report No. the sequence number of the PM report that he/she is about to send via text, that is, “1” for the first PM Report, “2” for the second PM Report, and so on.
  - SMS Receipt No is the number that will be sent by the Progress Monitoring System installed at the Central Office (PMS-CO) through GSM modem to acknowledge that the text message has been added to the database.
  - Date Sent is the date reported in Col. 1 of the last filled-out row in CPF-10.
  - Check No. is one of the pre-provided set of numbers to the enumerator (EN). The purpose of which is to ensure that the text message will not be added to the database more than once.
5. The TS sends the total number of households and total population in each verified CPF-10 to the PMS-CO through SMS, that is, texting the data to GSM modem at the central office.
6. The text message is received by the PMS server installed at the CO. Each PM text message received by the PMS-CO will be acknowledged with an “SMS Receipt Number” to indicate that the data sent by the TS have been received and accepted by the system.
7. The TS submits the accomplished CPF-10 and CPF-11, together with the accomplished CPF-2 or CPF-3 and CPF-4 to the DSO/SCO every Friday.
8. The DSO/SCO, in turn, submits the accomplished CPF-10 and 11 to the PO at least once a week, or the PSO may collect these forms from the DSO/SCO during his/her regular supervision rounds.
9. The PO verifies the correctness and completeness of the PM text messages received at the CO for each CPF-10 using the online confirmation program to ensure that the data in PM text messages received at the CO matches with the entries in their respective CPF-10.
10. Once the enumeration in the EA/barangay has been completed, the TS will send another PM report (thru text as discussed above) corresponding to the last batch of CPF-10 to the CO. In this case, the status of enumeration in CPF-10 should be “2” which means completed. The TS then submits the last batch of CPF-10 and 11, along with the accomplished CPF-2 or CPF-3 and CPF-4 and CPF-16 to the DSO/SCO.

11. The Receipt and Control Clerk (RCC) folios all CPF-10 received (with/without SMS Receipt Numbers by city/municipality in ascending geographic area code. All CPF-10 belonging to the same EA/barangay should be grouped together and arranged according to the date when the CPF-10 was prepared. A Folio cover (CPF-15) should be placed on top of the folio/bundle.

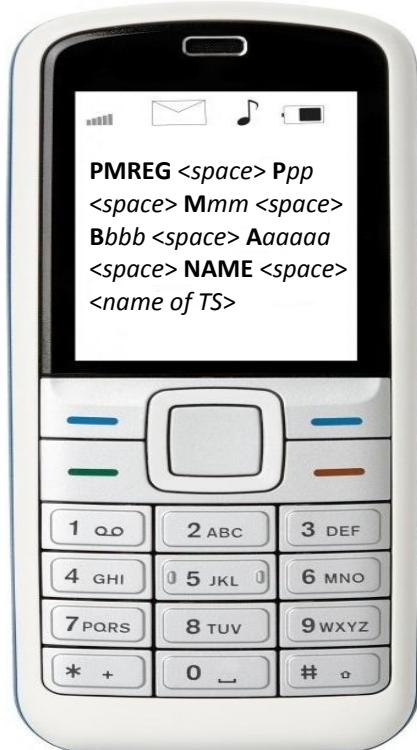
### **III. TEXT MESSAGING PROCEDURES**

#### **a. Registering the cell phone**

The number of the cell phone that will be used in sending summary data from CPF-10 will be registered by the TS. This is required so that the system would be able to detect or filter out prank text messages. The system has a way of checking whether the geographic area code in the text message corresponds to the area of assignment of the sender (TS). It is possible to register more than one cell phone using the same access code, i.e., sending reports for one municipality. The system also allows registering one cell phone to be used in sending PM reports for more than one city/municipality using access code for each city/municipality.

The procedure in registering the cellular phone number(s) is as follows:

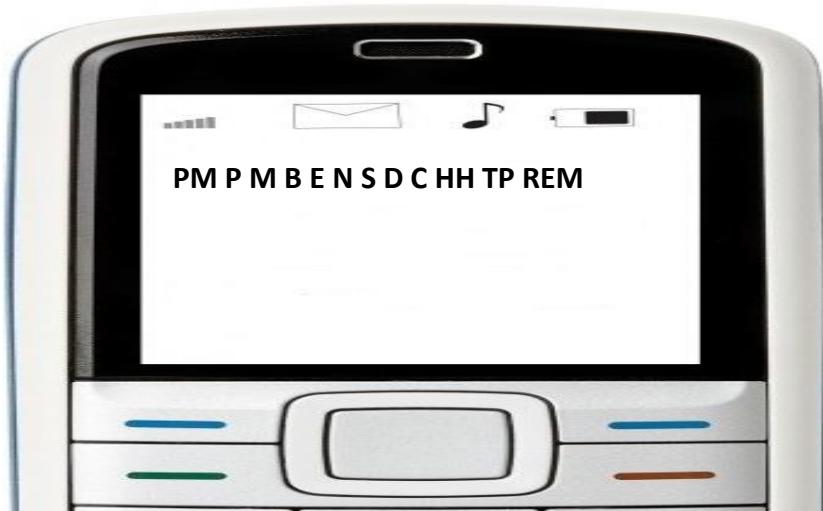
**Type**



**Where:**

|                           |   |
|---------------------------|---|
| <b>PMREG</b>              | required keyword indicating that the sender is registering his/her cellular phone number  |
| <b>P<sub>pp</sub></b>     | <b>P</b> is a prefix for the province code<br><i>pp</i> is the two-digit geographic code of the province where the TS is assigned   |
| <b>M<sub>mm</sub></b>     | <b>M</b> is a prefix for the city/municipality code<br><i>mm</i> is the two-digit geographic code of the city/municipality where the TS is assigned   |
| <b>B<sub>bbb</sub></b>    | <b>B</b> is a prefix for the barangay code<br><i>bbb</i> is the three-digit geographic code of the barangay where the TS is assigned  |
| <b>A<sub>aaaaa</sub></b>  | <b>A</b> is a prefix for the access code<br><i>aaaaa</i> is a unique five-digit access code that will be given to each TS during the training. The TS may be provided with more than one access code if his/her assignments cover more than one barangay. |
| <b>NAME</b>               | required keyword indicating that the next characters will be the name of the TS   |
| <b>&lt;name of TS&gt;</b> | name of the TS (First Name and Last Name, for instance, MARY IREN ASUNCION)   |

**The system will reply with the template in sending PM reports.**



**b. Sending PM Report through text messaging**

The total number of households and total population in CPF-10 shall be transmitted to the CO through SMS. Only those text messages received from registered cell phones will be accepted and acknowledged. Text messages from unregistered cell phones will be treated as prank messages and will be ignored. Furthermore, text messages coming from registered cell phones will be validated for correctness and consistency. If errors are found, the system will inform the sender by replying the details of the problem.

Valid text messages will be acknowledged by the PMS through an ‘SMS Receipt Number’ which should be written in its appropriate box at the upper left portion of CPF-10. This indicates that the totals in CPF-10 have been accepted and added in the PMS database at the CO.

In case a text message has not been acknowledged after two attempts in the same day, the sender must wait for 24 hours before resending the same text message, that is, on the following day. If the text message remains unacknowledged after the third attempt, it is possible that there is a problem in the cell site in the area or in the cell phone being used. In such case, a remark will be written in CPF-10 stating that the totals had already been sent out thrice in a span of two days but no acknowledgement was ever received.

Below is the template to be used in sending text messages:



**Where:**

|              |   |
|--------------|---|
| <b>PM</b>    | required keyword;<br>the program will not accept messages that do not start with <b>PM</b>  |
| <b>Ppp</b>   | <b>P</b> is the prefix for the province code<br><i>pp</i> is the province code (2 digits)   |
| <b>Mmm</b>   | <b>M</b> is the prefix for the city/municipality code<br><i>mm</i> is the city/municipality code (2 digits)   |
| <b>Bbbb</b>  | <b>B</b> is the prefix for the barangay code<br><i>bbb</i> is the barangay code (3 digits)  |
| <b>Eeeee</b> | <b>E</b> is the prefix for the EA number<br><i>eeee</i> is the EA number (4 digits)   |
| <b>Nnnn</b>  | <b>N</b> is the prefix for the EN’s code<br><i>nnnn</i> is the EN’s code (3 digits)   |
| <b>Ss</b>    | <b>S</b> is the prefix for the status code<br><i>s</i> is the status of enumeration in the barangay/EA (one digit: “1” for ongoing and “2” for completed)<br>If you do not supply the status of enumeration, the program will treat it as ‘1’ (default status code) |
| <b>Dmmdd</b> | <b>D</b> is the prefix for the date<br><i>mm</i> is the month (2 digits)<br><i>dd</i> is the day (2 digits)   |
| <b>Ccccc</b> | <b>C</b> is the prefix for the check number<br><i>cccc</i> is the four digit check number   |
| <b>HHnnn</b> | <b>HH</b> is the prefix for the total number of households <i>nnn</i> is the total number of households (no maximum number of digits is set)  |
| <b>TPnnn</b> | <b>HP</b> is the prefix for the total population  |

|                                 |   |
|---------------------------------|---|
|                                 | <i>nnn</i> is the number of total household population (no maximum number of digits is set)   |
| <b>REM</b> <space><br><Remarks> | <b>REM</b> is the keyword to be used for the remarks in the SMS-PM report<br>(<Remarks> may contain comments, explanations, and/or observations about the situation in the EA, or the progress of operation (optional);<br>the sender (TS) may indicate whatever message he/she wants to relay to the CO but it should be as short as possible. For example, the TS may send the reason/s why the conduct of enumeration is slow in his/her area or why the number of enumerated households by a certain EN is lower compared with other ENs. |

For a valid text message, the system will reply with:



Where **R** is a prefix for the SMS Receipt Number and *sssss* is the five-digit SMS Receipt Number, which should be copied to CP Form 10.

## ILLUSTRATION 7.1 Texting Information from a Filled Out CP Form 10

CP Form 10  
(Accomplish in duplicate.)

Republic of the Philippines  
PHILIPPINE STATISTICS AUTHORITY

### 2015 Census of Population EN'S ACCOMPLISHMENT/PROGRESS MONITORING REPORT (FOR PILOT CENSUS USE ONLY)

PROVINCE BULACAN  
CITY/MUNICIPALITY CITY OF SAN JOSE DEL MONTE  
BARANGAY FRANCISCO HOMES-MULAWIN

ENUMERATION AREA NUMBER -----

EN'S CODE -----

STATUS OF ENUMERATION -----

1 4  
2 0  
0 2 8  
0 1 0 0  
1 3 0  
1 1 – Ongoing  
2 – Completed

This portion is to be filled out only by the Team Supervisor (TS).

PM Report No.

1

Date (mm/dd)

0 8 0 8

Check No.

0 2 1 2

SMS Receipt No.

**INSTRUCTION:** This form should be accomplished by the Enumerator everyday corresponding to the successful interviews of household and institution. Entries in this form should come from CP Form 1.

| Line No.  | Date     | Household   |            | Total Population   |            | Number of Special HSNs | Number of Callbacks for Household and Institution | Remarks |
|---|----------|---|------------|--|------------|------------------------|---|---------|
|   |          | Number  | Cumulative | Number   | Cumulative |                        |   |         |
| (1)   | (2)      | (3)   | (4)        | (5)  | (6)        | (7)                    | (8)   |         |
| 1   | 08/04/14 | 21  | 21         | 90   | 90         |                        |   |         |
| 2   | 08/05/14 | 23  | 44         | 91   | 181        |                        |   |         |
| 3   | 08/06/14 | 19  | 63         | 85   | 266        |                        |   |         |
| 4   | 08/07/14 | 18  | 81         | 90   | 356        |                        |   |         |
| 5   | 08/08/14 | 20  | 101        | 99   | 455        |                        |   |         |
| 6   |          |   |            |  |            |                        |   |         |
| 7   |          |   |            |  |            |                        |   |         |
| 8   |          |   |            |  |            |                        |   |         |
| 9   |          |   |            |  |            |                        |   |         |
| 10  |          |   |            |  |            |                        |   |         |
| TOTAL   |          | 101   |            | 455  |            |                        |   |         |
|   |          | HH  |            | TP   |            |                        |   |         |
| Prepared by:  |          | Verified by:  |            | Confirmed by:  |            |                        |   |         |
| <u>Jumawan</u><br><u>JONEL JUMAWAN</u><br>Enumerator<br>(Signature over printed name)<br>08/08/14 |          | <u>MAsuncion</u><br><u>MARY IREN ASUNCION</u><br>Team Supervisor<br>(Signature over printed name)<br>08/09/14 |            | Provincial Statistical Office Staff<br>(Signature over printed name) |            |                        |   |         |
| Date Submitted  |          | Date Verified   |            | Date Confirmed   |            |                        |   |         |

To text the information in CP Form 10 above, type

**PM P14 M20 B028 E0100 N130 S1 D0808 C0212 HH101 TP455 REM**

**c. Correcting previously sent counts**

If the PM text message that has been acknowledged or accepted is found to have discrepancies, the TS can correct data through another text message, this time using PMCOR keyword. Below is an example of correcting data sent.

**If previously you have typed the following:**      **The system would reply as follows:**



To change the total population from 545 to 455,

**The sender should send the message shown below to correct the entries:**

**The system will reply as follows:**



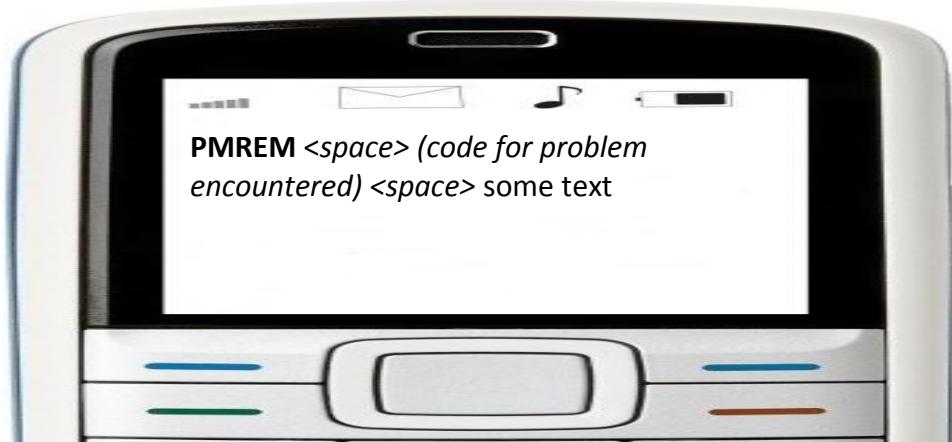
Where **U** is a prefix for the SMS Receipt Number of the updated/corrected counts.

#### d. Sending Remarks

PMS also allows sending important remarks/messages through text messaging using the keyword PMREM. The information may contain, among others, problems encountered during the enumeration. For easy texting of remarks/problems, the following codes should be used:

- 00 – Inquiries/questions that need to be answered
- 01 – Death in line of duty
- 02 – Injury/accident
- 03 – Dog bite
- 04 – Motorcycle accident
- 05 – Illness acquired in line of duty
- 06 – Peace and order problem
- 07 – Calamity-affected area
- 08 – Boundary dispute
- 09 – Padding
- 10 – Evacuation center/area
- 11 – Lost or damaged census documents or materials
- 12 – Unexpected population growth area
- 13 – EN backed out
- 14 – TS backed out
- 15 – Other problems encountered during enumeration, specify

**The syntax in sending information that affects the field operation is as follows:**



**Examples:**



**Note:** some texts could be name, area code, or any description and up to 100 characters.

**The system will reply as follows:**



**e. Obtaining Check Numbers or verifying the Status of Check Numbers Through Text Messaging**

Check numbers are four-digit numbers generated by the CO unique for each EA/barangay that will be used in sending PM report. After registering the cell phone, the TS can obtain/verify the check numbers that will be used in sending PM report of an EA by using the keyword PMCKN. A set of six four-digit check numbers will be generated per EA. A check number can be used only once.

The same keyword can also be used to find out which check numbers have already been used and which are available.

**The syntax for the keyword is:**



If the EA from the example was accepted by the PMS server, a reply shown below will be received:



## Appendix – General Specifications of PMS

