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# NC Broadband Survey Phone-Based Reporting Tool Description

October 2020 Edition

## OVERVIEW

This document provides details on how the phone-based tool works, the data it collects, and how that data is integrated into the full broadband survey dataset.

## DETAILED FIELD DESCRIPTIONS

The following data is collected by the phone reporting tool. These fields are presented in the database unions with slightly different names, most prefixed with a p\_ to indicate they are only available for phone-based responses. Fields prefixed with p\_n\_ are the "normalized" versions of the response. For example, if a Spanish user entered "Si" for yes, that would normalize that to "1" in the p\_n\_ fields..

### source

This field indicates if the user called or texted the tool.

Possible values: CALL, SMS

### exit\_flag

This field indicates how far through the survey the user reached before dropping.

- CALL\_HAS\_INTERNET - caller indicated internet, directed to URL with voice and text message if possible. No data collected except for phone/carrier.
- CALL\_PREFER\_TXT - caller indicated that they do not have internet and that they prefer to use the text systems and Twilio was able to successfully send a text message to them. If the text message is sent successfully, the call will be terminated.

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- VOICE\_INTER\_0 - set prior to first recording for full street address. This flag may appear depending on when exactly the caller hangs up during the voice recording process. There may or may not be useful recordings with this flag.
  - HANGUP\_ON\_ADDR - set if Twilio detects a hang up during the voice recording for either the full street address or the spelling of the street name. There may or may not be useful recordings with this flag.
  - VOICE\_INTER\_1 - caller stayed on the line through both recordings. This flag is set when we expect a valid recording. If the caller remains on the line and answers additional questions, this flag will be replaced with a new value.
  - VOICE\_INTER\_2 - caller answered the “reason for lack of internet” question and is still on the line.
  - VOICE\_COMPLETED - caller answered all questions and there should be valid data in all fields.
  - INITIAL\_TXT\_FAILED - User sent a text message to Twilio, but the first text back to the user failed. No data other than the phone number/carrier.
  - SUBSEQUENT\_TXT\_FAILED - At least one text message was delivered to the user, but at some point later in the chat, a text message to the user failed. The survey will stop at that point and no further texts will be sent unless the user restarts.
  - TXT\_HAS\_INTERNET - user indicated they have internet access and a text message was sent with the link to the survey. No additional data is collected at this point.
  - TXT\_NO\_START - user initiated a chat with Twilio, however the user never responded to the first question, but no error was indicated upon sending the text message.
  - TXT\_NO\_CONFIRMED\_ADDR - user entered data for their address, but did not answer the confirmation question within 10 minutes. All data is recorded, but was never confirmed as correct by the user.
  - TXT\_FINISHED - user confirmed their address and was presented questions about the reason for not having internet and the number of students present.
  - STATUS - set when the magic word for status is received and the status provided.
  - SYS\_DOWN - set by the SystemDown flow which is used when the system is overloaded or turned off for some reason.

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## Progress

This field indicates the approximate percentage of the survey that the user completed. This field is provided so that filters can be created across phone and online surveys to ignore records without addresses. The following table shows the mapping of exit\_code to Progress.

<b>exit_flag</b>	<b>Progress (integer %)</b>
CALL_HAS_INTERNET	10
CALL_PREFER_TXT	10
HANGUP_ON_ADDR	10
VOICE_INTER_0	10
VOICE_INTER_1	60
VOICE_INTER_2	80
VOICE_COMPLETED	100
TXT_NO_START	0
TXT_HAS_INTERNET	10
INITIAL_TXT_FAILED	0
SUBSEQUENT_TXT_FAILED	10
TXT_NO_CONFIRMED_ADDR	80
TXT_FINISHED	100
STATUS	NULL
SYS_DOWN	NULL

## TEXT opening\_message

This is the raw, unmodified, first message received from the user. Note that if the user does not complete the survey (by waiting more than 10 minutes to respond to a text) then they will be entered in the database a second time with a new opening\_message. This can happen when a user takes a long time to complete a question; i.e. you may see the answer to a previous asked

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question (which was the last text message the user received) as an opening\_message. In those cases we could manually find the phone number again and possibly piece the address together. Note that the default opening\_message is “internet” but some organizations have been instructed to use other key words as opening messages to enable user traceback to their organization or community.

## **VOICE has\_internet**

If you have internet access at your location press 1, or say yes.

If you do not have internet access at your location press 2, or say no.

Anything other than 1 or Yes is considered a no and the survey proceeds. If a 1 or Yes is detected then the user is instructed that the phone tool is only for those with no internet. They are then provided the web link by voice and text message (unless a landline is detected) and the call ends with a CALL\_HAS\_INTERNET exit\_flag. In the database, for voice calls this value is stored as: {what user pressed} <@> {what user said} Only one value or the other will be present.

## **TEXT has\_internet**

Do you have internet access at your location? Please respond with YES or NO.

The user is given two chances to provide a valid answer. Any message that has a lower or upper case “y” as the first character is considered “yes”. Likewise, any message that has a lower or upper case “n” as the first character is considered “no”. If after two tries no valid answer is provided, no is assumed. Any “yes” answer causes the survey to end with an exit\_flag of TXT\_HAS\_INTERNET with the user being provided a weblink to the speedtest survey.

## **TEXT reason\_no\_internet**

What is the primary reason there is no internet at this location? Please respond with a number from this list: 1 - too expensive 2 - not available from an internet provider 3 - other reason 0 - prefer not to answer

No validation is provided on this question. Anything other than a 1, 2 or 0 should be considered “3 - other reason”. Note that some users have entered “1 and 2”.

## **VOICE reason\_no\_internet**

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What is the primary reason there is no internet at this location. Press 1, if it is too expensive. Press 2, if it is not available from an internet provider. Press 3, for any other reason. Press 0, if you prefer not to answer.

The user is given two extra chances to answer with a valid response. Note that this is a button press response only; no voice option is provided. If after the third try the user does not provide a valid response, the last pressed number will be logged and the survey will continue. Anything other than 0,1,2 or 3 should be considered “0 - prefer not to answer”.

## **TEXT students\_present**

Do any K-12 students reside at this location? Please respond with YES or NO, or X if you prefer not to answer.

No validation is provided on this question. Anything that begins with a “y”, case insensitive should be considered “yes”. Anything that begins with an “n”, case insensitive should be considered “no”. All other responses should be considered “X - prefer not to answer”

## **VOICE students\_present**

Do any K 12 students reside at this location. Press 1 if yes. Press 2 if no. Press 0 if you prefer not to answer.

The user is given two extra chances to answer with a valid response. Note that this is a button press response only; no voice option is provided. If after the third try the user does not provide a valid response, the last pressed number will be logged and the survey will continue. Anything other than 0,1 or 2 should be considered “0 - prefer not to answer”.