

# 2016 Census Test – Enumeration (COMPASS)

## Non-Response Follow-Up (NRFU) Operations

### What is COMPASS?

The COMPASS application is being fielded for the 2016 Census Test to collect person interview responses from households not responding to Internet self-response or printed paper Census questionnaires. The COMPASS will also collect time and expense data and enumeration work availability to optimize case assignments.

### Key Screens

*Active Caselist, Sample Questionnaire screen, Work Availability and Expense & Time*

The image displays four screenshots of the COMPASS application interface:

- Caselist:** Shows a list of cases with details like address and NRFU status. Example: 715 MOONLIGHT DR, SUITLAND MD 20752.
- INTRO:** A welcome message: "Hello, I'm (your name) from the U.S. Census Bureau. (Show ID). I'm here to complete a Census questionnaire for 715 MOONLIGHT DR. The interview should take about 10 minutes." It includes a link to a hand respondent information sheet and confidentiality notice.
- Work Availability:** A calendar view showing availability for Thursday, Friday, Saturday, Sunday, and Monday. Friday and Monday are marked as "Not Available". A "Submit Availability" button is at the bottom.
- Summary:** Displays trip details: Date (12/02/2015), Status (Not Attested), Total Miles (55), Summary (Work Type: Regular, Start Time: 09:00 AM, End Time: 04:30 PM, Total Hours: 7.50), Total Expenses (\$3.00), and Expense Details (Telephone: \$3.00). It also has a "Submission Comment" field.

### Stakeholders

- 2020 Research and Planning Office
- Decennial Statistical Studies Division
- Nonresponse Follow-up Design and Operation
- Field Division and Population Division
- Application and Development and Services Division
- Office of Information Security

### Collaborative Development

- Agile (Iterative) using Scrum Method
- Integrated Project Team
- Demonstrations and evaluation by Stakeholders every 2 weeks

### 2016 Enhancements

- Revised user interface
- Korean and Chinese Language Capability
- Collection of usual home elsewhere
- Additional Content Edits
- Collection of Multi Units
- NRFU Reinterview

### Security

- FIPS 140-2 (Encrypted Data at Rest)
- SSL (Encrypted Data in Motion)
- Respondent Data Removed on Case Completion
- Storing credentials in the native key stores for offline mode

### Operational Feature Highlights

- Integrated Case Management, Mapping, Contact History, and Questionnaire (Enumeration)
- Near real-time updates of late returns, case assignments, and contact strategies
- Operates in disconnected and connected states
- Supports Android and iOS

### Technical Goals

- ✓ Mobile First Approach
- ✓ Maximize Re-Usability
- ✓ Maximize cross-platform with HTML 5 (HTML, Javascript and CSS)
- ✓ Minimize 3<sup>rd</sup> Party software requiring distribution licensing
- ✓ Minimize native programming requirements
- ✓ Use C/C++ when needed, pure platform native when necessary
- ✓ Leverage industry standards and best practices
- ✓ Primarily Single Cross-Platform Source Code Base (~95%)
- ✓ Application Wrapper (~5%)
  - Secure Data Persistence (FIPS 140-2)
  - OS Integration and Application installation
  - Communications Management
- ✓ Implements
  - De-Coupled Standardized Interfaces and Web Services
  - Interpreted XML Questionnaire Specifications

### Platform Features

- Adaptability – Supports **Multiple** Operating Systems, Form Factors, UXs, Switchable Layouts and Themes
- Standardized requirements specifications and interfaces leveraging XML and Web Services
- Designed for data collection operations while either connected or disconnected from the internet
- Multiple questionnaires supported through validated XML Specifications dynamically interpreted and displayed
- Rules based Automatic transmissions and synchronization including scheduled times and manual capability
- Supports questionnaires specification in multiple languages
- Deployable as a mobile application on iOS and Android
  - Offline On-Device Training Mode available
- Access to device specific hardware including GPS, Accelerometer and Storage
- Leverage JAVA/XML processing features for data exchange via staging tables
- Modularize the server components for scalability and distributability