Development of an Integrated CARI Interactive Data Access System for the US Census Bureau

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Development of the CARI Interactive Data Access System

- CARI Interactive Data Access System overview
- Coding workflow
- Data flow
- System integration
Census Bureau Context

- Implemented CARI* using Blaise 4.8.2
- Want to do behavior coding using CARI files for the ACS Content Test, starting early 2011
- CATI and CAPI sources
- System must be integrated with current Census Bureau infrastructure for data loading and authentication
- Quality assurance coding sometime in future

* Computer Audio Recorded Interviewing
Web-based CARI data access system

- Behavior coding
- Quality assurance coding
- Online training
- Automated assessment tool for user feedback
- Tools for integration with Census Bureau infrastructure
- Coaching Component (2010 – 2012)
Workflow for Behavior & QA Coding

- Create new survey entry and user accounts
- Configure and assign staff to the survey
- Load data into the system
- Assign cases to sites and coders
- Conduct coding
- Monitor coding progress
- Data extraction and close-out
User Roles

• System roles
  – System Administrator
  – Security Administrator
  – Site Administrator

• Survey roles
  – Research Manager
  – Headquarters Staff
  – Supervisor
  – Coder
Web Pages by Roles

Research Manager and HQ Role

Supervisor Role
- Assign Staff To Survey
- View Staff Workload
- Assign Cases To Staff
- Restart Cases
- Reports

Coder Role
- Login
- Select Survey
- Coding Workload
- Case Coding
  - Media Player
  - Image Viewing
  - Notes

- Survey Configuration
- Assign Cases To Sites
- Review Recordings
- Query Data
- Extract Data
- Set Sampling Rates
- Manage Case Sampling
Coding Workflow

• **System Administrators**
  – Create new surveys & user accounts
  – Load survey data
  – Close out

• **Research Managers**
  – Configure behavior and QA codes
  – Assign cases to sites
  – Monitor progress

• **Supervisors**
  – Assign cases to coders
  – Monitor progress

• **Coders**
  – Coding cases
Data Flow Overview

Field
- Transmit
- CAPI Interviewers

Field CMS
- Data Load
- CARI Database

MCS

Headquarters
- WebCATI

Call Centers & Regional Offices
- CATI Interviewers
- CARI Coders
- HQ Staff
System Integration

- **LDAP***
  - User authentication

- **Master Control System (MCS)**
  - Import survey data, Blaise audio files & captured Blaise screen images

- **Data extraction**
  - Reports
  - Analysis

* Lightweight Directory Access Protocol
Loading Survey Data - What

- Case’s paradata
  - Case ID
  - Question ID
  - Interviewer ID
  - Interview mode
  - Language
  - etc
- Blaise audio files
- Blaise captured screen images
- Survey data can be loaded all-at-once or on a flow basis
Loading Survey Data - How

- File-based interface
  - Eliminate dependency
  - Freedom of implementation choices
  - Easy maintenance
- Oracle external tables
  - Treat data files like a table
  - Handle Blaise audio files and captured images as part of binary large-objects (BLOBs)
  - Improve performance compared to other alternatives
Data Extract

- Coding data & notes
- Multiple formats
  - Excel
  - SAS

Select the type of data to extract:

- Behavior Coding Questions Not Coded
- Behavior Coding Notes
- Behavior Coding Data
- Behavior Coding Reliability Test Notes
- Behavior Coding Reliability Test Data
- Behavior Coding SAS Input Statement for Questions Not Coded
- Behavior Coding SAS Input Statement for BCC Notes
- Behavior Coding SAS Input Statement for BCC Coding Data
- Behavior Coding SAS Input Statement for IRR Notes
- Behavior Coding SAS Input Statement for IRR Coding Data
- Quality Assurance Notes
- Quality Assurance Data
- Quality Assurance Reliability Test Notes
- Quality Assurance Reliability Test Data
- Quality Assurance SAS Input Statement for QAC Notes
- Quality Assurance SAS Input Statement for QAC Coding Data
- Quality Assurance SAS Input Statement for IRR Notes

When you click extract data, you will prompted for the download location.
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