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# **Mathematica Policy Research**

## **FedCASIC Conference**

**March 2010**

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# Overview

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- **Survey Management System (SMS) Advancements**
  - Live Updates
  - POET
  - Survey Response Data Editing and Explorer
  
- **Other System Development**
  - WebSurv 2.0
  - MOBI
  - Blaise IS
  
- **Work at Home Interviewing**
  
- **2010 Plans**
  - New System Architecture
  - Integrated computer-assisted interviewing (CAI) Survey Management System(SMS)

# BACKGROUND

- In 2009 Mathematica focused most of our attention on enhancing our current SMS
- SMS was originally developed in 2001 to provide centralized reporting and to manage the movement of surveys between CATI/CAPI, and locating
- Overnight processes were used to sync the different data collection modes with SMS
- Over the years new modules were added to cover the full spectrum of data collection needs such as:
  - Receipting, batching, reporting, document processing, randomization, incentive payments, and field sample assignments and management
- Past SMS enhancements include
  - Ability to handle complex relationships among entities such as schools, teachers, classrooms, students, and parents, or between establishments
  - Multiple questionnaires per entity and multiple modes per questionnaire

# 2009 SMS Advancements

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- **Live updates between data collection instruments and SMS**
  - Real-time calls using Blaise API and SQL stored procedures
  - Retrieve and update status and contact information between questionnaire and SMS at start or completion of interview
  - Provide centralized up-to-date status and contact information between CATI, CAPI, web, and hard copy
  - Information is available immediately to other modes
  - Eliminates unnecessary telephone interviews on completed questionnaires
  - Reduces time spent reconciling status and contact information between systems

# 2009 SMS Advancements (*continued*)

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## ■ Paper Online Edit Tracking (POET)

- Used on mail surveys to track pre-edit response errors and corresponding resolutions
- Identifies and flags questionnaires for critical-item callbacks or supervisor review
- Can be programmed to do complex edit checks or Sample Person Verification (SPV)
- Reports by question, quality control (QC) editor, and error type
- Improves QC productivity and quality

## ■ Survey Response Data Explorer and Editor

- Search and display questionnaire response data
- Permissions levels that allow editing or display only
- Link to scanned image of hard-copy questionnaire
- Audit trail of all changes by question with date, id, value, edit type and reason

# Other System Developments

## ■ **WebSurv 2.0**

- Web survey software developed by Mathematica
- Designer interface
- Generates 508-compliant code
- Developed using .NET technology and is integrated with SMS

## ■ **MOBI – Mobile Interviewing Survey Management**

- MOBI software is used on laptops by field interviewers to manage case assignments and to send and receive new and completed cases
- Developed in .NET/SQL and is integrated with SMS
- Transmits using virtual private network (VPN) or web replication
- Synchronization with central office by landline or broadband

## ■ **Blaise IS (4.8.1)**

- Use for multimode CATI/Web surveys
- Data from both modes is stored in real time to one central database residing behind the firewall

# Work at Home Interviewing Program

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## ■ Technology

- Using Citrix and VPN
- Provide SoftPhone software, headset, and laptop if needed
- Live monitoring capabilities
- Does not work well with dial-up or satellite internet access

## ■ Staffing

- Use only experienced interviewers
- No major difference in production metric

## ■ Benefits

- Provides staff with flexible work schedules
- Ability to expand capacities quickly outside of the physical constraints of the Survey Operations Center
- Same technology is used for pop-up data collection centers and other online activities, such as coding

# 2010 Plans

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## ■ **SMS New System Architecture**

- Upgrade architecture of SMS and other related systems
- Move to tiered approach – presentation layer, business layer, and data store
- Restful web services, Silverlight, and Windows Presentation Framework (WPF), which provide a more flexible presentation for mobile access

## ■ **Develop Integrated CAI Survey Management Module**

- New module within the SMS
- House all management information within SMS
- Remove redundant management data from Blaise
- Blaise DataLink feature to store Blaise database as SQL tables

## ■ **MOBI**

- Add functionality to enable field interviewers to sync with the central office using wireless/broadband



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# Any Questions?

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