



Decision Information Resources, Inc.

Providing the Right Information for Making the Best Decisions

MULTI-MODE SURVEY SYSTEMS ON A SHOESTRING: ADAPTING OFF-THE-SHELF SURVEY SYSTEMS TO SUPPORT COMPLEX MULTI-MODE DATA COLLECTION

Monica Polino Schneider
Heather M. Morrison, MA

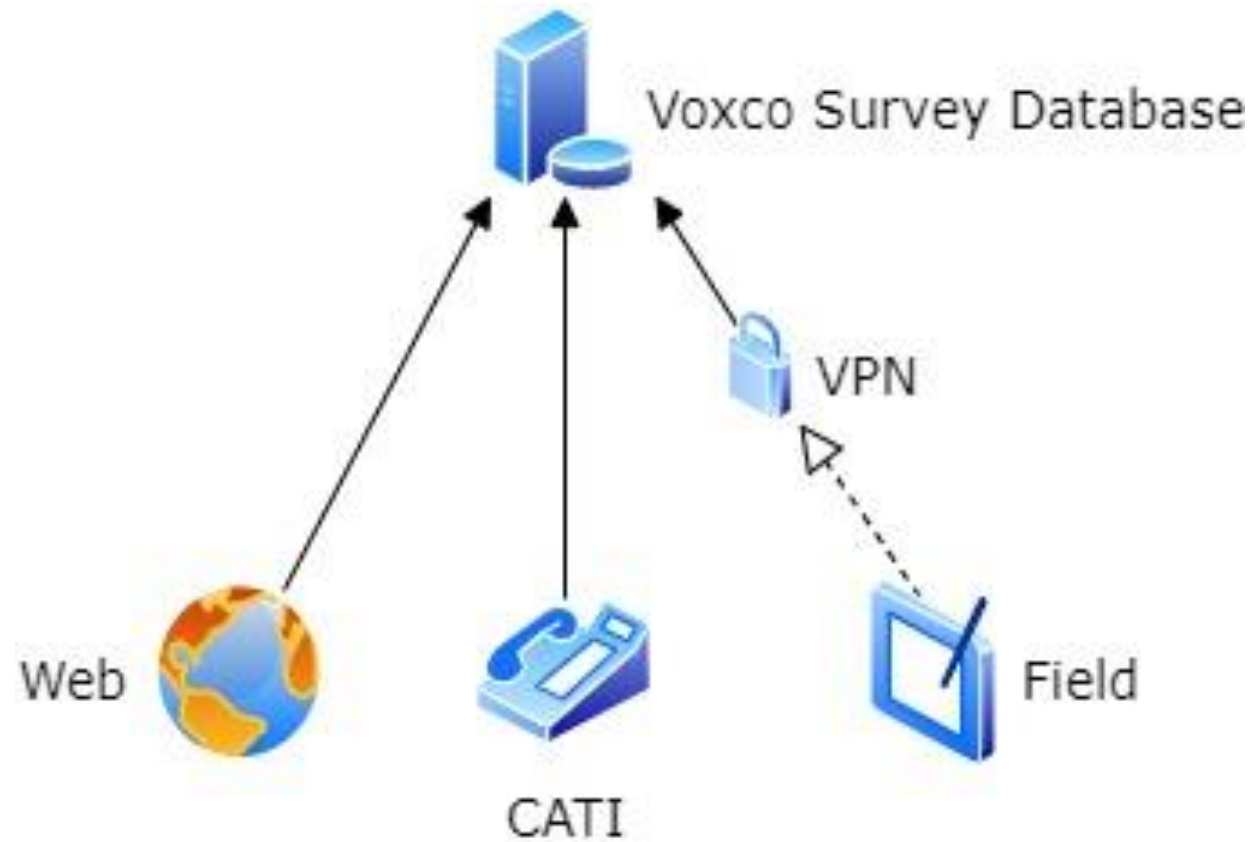
Background

2

- Managing cases across multiple modes presents technical challenges
 - ▣ Control and track the flow of cases seamlessly across all modes
 - ▣ Provide real-time case status across all modes
 - ▣ Manage single cases with complex contact information including:
 - Multiple types of contacts (respondent/alternate)
 - Multiple pieces of information for each contact type (telephone numbers, addresses, email addresses)
- Meeting these challenges can be difficult
 - ▣ Develop proprietary case management systems (larger organizations)
 - ▣ Adapt existing products (smaller organizations) with mixed success

DIR's Solution: System Structure

3



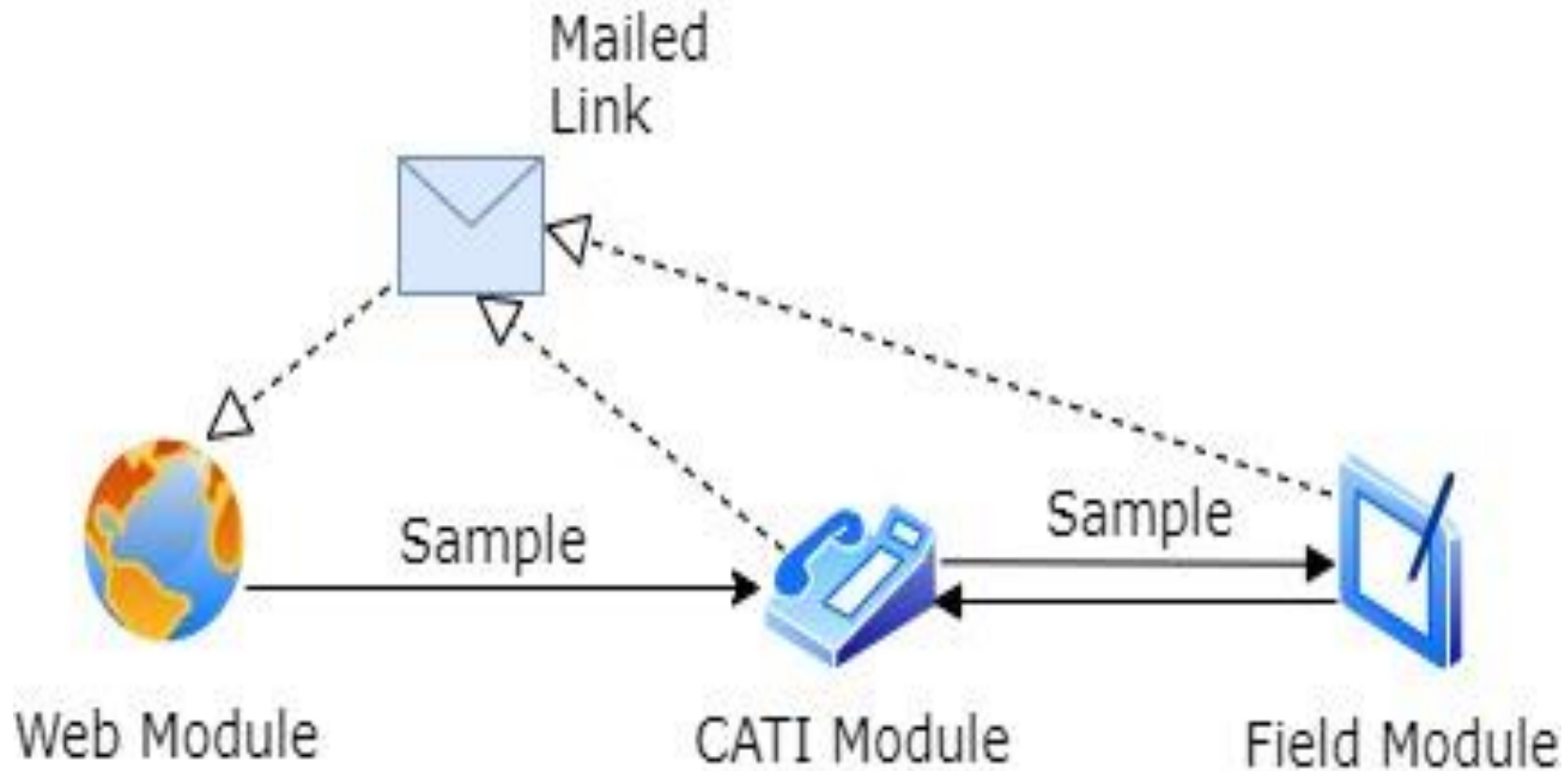
DIR's System Structure & Customization

4

- **All** data captured in **one** Voxco database
- Three Voxco modules developed:
 - CAWI (accessed via a link)
 - CATI –Telephone interviewing module
 - CATI – Field interviewing module (accessed by VPN)
- System customization required
 - Sample management system
 - Introductory screens
 - Case-level data display
 - Paradata capture via interviewer-facing questions
 - Case result codes

DIR's Solution: Sample Management System

5



System Modes and Sample Flow

6

- Web-mode:
 - ▣ Deployed as web-only mode during the first two weeks of data collection
 - ▣ Accessed by unique secure link sent via USPS
 - ▣ Available at any point during data collection
- Telephone mode:
 - ▣ Available systematically after the two week web only period (or at the request of a respondent)
 - ▣ Accessed either by outbound or inbound dialing
- Field mode:
 - ▣ Available once telephone numbers for the case were exhausted
- Movement across modes
 - ▣ CATI interviewers could pull up and complete cases at any point if a respondent called
 - ▣ Field interviewers could send cases back to the CATI
 - ▣ Both telephone and field interviewers could send the web link to the respondent's email of choice at any time

Features of Interviewer-facilitated Modes

7

- CATI mode:
 - ▣ *Case ownership*: available to any telephone interviewer
 - ▣ *Call scheduling*: queued and scheduled according to complex call rules
 - ▣ *Call cycling*: cycled systematically through telephone numbers (max 15) according to complex cycling rules
 - ...Then case passed to the field
- Field mode:
 - ▣ *Case ownership*: available only to assigned interviewer
 - ▣ *Call scheduling*: managed by interviewers according to case need
 - Interviewers selected the address/telephone number to attempt

Interviewer-facilitated Modes: Screen Shots

8

- CATI mode – selected “New Call” to access available case in queue

Interviewer Session ID : mschneider Project : HUD_P_CATI Name : Monica Schneider
Calls : 5 Completed : 0 Last Record : 0001000001 Mode : User Sample/Restricted Inbound

New Call Call-Back Quit the project

Open the selected record: Record Tel. OK Review Review Open End

Total Call-Back(s) : 0 Copyright 2021 Voxco

- Field mode – selected case from assigned list

Interviewer Session ID : mschneider Project : HUD_P_Field Name : Monica Schneider
Calls : 0 Completed : 0 Last Record : Mode : User Sample/Restricted Inbound

New Call Call-Back Quit the project

Open the selected record: Record Tel. OK Review Review Open End

Refresh

No	Quest	Phone #	Name	Lang.	Nb	Result	Call-Back	Memo	History
1	0001000004	999-999-2644	Smith, Susan	EN	11	[94] Final - no more numbers - DC1	13/04/2021 14:00		
2	0001000006	999-999-5623	King, Kayla	EN	7	[94] Final - no more numbers - DC1	14/04/2021 19:15		
3	0001000002	999-999-1645	Sanders, Stephanie	EN	5	[94] Final - no more numbers - DC1	15/04/2021 10:00		
4	0001000001	999-999-1644	Collins, Carl	EN	13	[ND] Field - Not Dialed	15/04/2021 20:15		
5	0001000005	999-999-1722	Long, Lisa	EN	6	[94] Final - no more numbers - DC1	16/04/2021 16:00		

Introductory Screens (Interviewer-facilitated Modes)

- Case-level data display
 - ▣ Mode-specific display of relevant case data
 - CATI mode: Since the CATI module cycled through multiple telephone numbers, initial questions and the header provided information regarding the number to be attempted
 - Field mode: All available contact information and full call history were displayed so interviewers could make decisions regarding which telephone numbers and addresses to attempt
- Paradata capture
 - ▣ Mode-specific interviewer-facing questions designed to capture relevant paradata
 - CATI mode: Questions were designed to capture information about the incoming and outgoing calls
 - Field mode: Additional questions were added to capture information about field visits as well as telephone calls to contact the respondents and alternate contacts

Introductory Screens – CATI Mode

10

Name	Mark Mitchell	Partial?		Start date	Wednesday, May 15 2019
Phone	9999992681	REF_DATE	January 2015	End date	Wednesday, July 10 2019
INCENTIVE	\$50	TRI_DATE	January 2018	RACode	C
ID #	0001000003			GROUP	A

Progress  47%

Navigate : INT50 

NUMBER TO DIAL: 9999992681

YOU ARE CALLING ALTERNATE CONTACT: Rory Reynolds, Cousin

WHAT IS THE RESULT OF THIS CALL?


- OK** Someone is answering your call
- 10** Answering Machine - Respondent Script
- AB** Answering Machine - Alternate contact Script
- AK** No answer
- AU** Regular Busy
- AV** Fast Busy
- AO** Number disconnected, no longer in service
- AM** Fax / data line
- AN** Number temporarily disconnected
- AP** Unable to connect to number at this time
- 01** Additional outcome codes

Introductory Screens – Field Mode

11

Name	Carl Collins	Partial?		Start date	Wednesday, May 15 2019
Phone	9999991644	REF_DATE	October 2015	End date	Wednesday, July 10 2019
Incentive	\$50	TRI_DATE	October 2018	RACode	C
ID #	0001000001	GROUP	A		

Face Sheet

Progress  43%

Navigate : SELNUM

Which set of contact information is this attempt associated with?

The current line is 2

Index	Name	Phone	Relation	Address 1	Address 2	City	State	Zip
1	Carl Collins	9999994458	RES Respondent	9999 Hartford St SE		Washington	District of Columbia	20020
2	Aaron Adams	9999991644	ALT Friend	8888 Eads PI NE		Washington	District of Columbia	20019
3	Brian Baxter	9999996734	ALT Uncle	1234 Q ST		Washington	District of Columbia	20000


- 00 Use current phone number/address
- 01 Row 01
- 02 Row 02
- 03 Row 03
- 04 Row 04
- 05 Row 05
- 06 Row 06
- 07 Row 07
- 08 Row 08
- 09 Row 09
- 10 Row 10
- 11 Row 11
- 12 Row 12
- 13 Row 13
- 14 Row 14
- 15 Row 15

Introductory Screens – CATI Mode

12

Name	Mark Mitchell	Partial?		Start date	Wednesday, May 15 2019
Phone	9999992681	REF_DATE	January 2015	End date	Wednesday, July 10 2019
INCENTIVE	\$50	TRI_DATE	January 2018	RACode	C
ID #	0001000003			GROUP	A

Progress  42%


Navigate : INT10 

Is this an incoming call, outgoing call, or field call-in?

- IC** Incoming - Call
- OK** Outgoing - Call
- CI** Field - Call-In
- 09** Not dialed or attempted - need to exit case

Name	Mark Mitchell	Partial?		Start date	Wednesday, May 15 2019
Phone	9999992681	REF_DATE	January 2015	End date	Wednesday, July 10 2019
INCENTIVE	\$50	TRI_DATE	January 2018	RACode	C
ID #	0001000003			GROUP	A

Progress  45%

Navigate : SRCE1 

Are you responding to...

- 1** A 'Sorry I Missed You' card that was left at your door?
- 3** A letter or postcard you received in the mail
- 4** An email you received
- 5** A voice mail message
- 7** DON'T KNOW
- 8** REFUSED

Introductory Screens – Field Mode

13

Name	Carl Collins	Partial?		Start date	Wednesday, May 15 2019
Phone	9999991644	REF_DATE	October 2015	End date	Wednesday, July 10 2019
Incentive	\$50	TRI_DATE	October 2018	RACode	C
ID #	0001000001			GROUP	A

Face Sheet

Progress  46%


Navigate : INT10 

IS THIS AN INCOMING CALL, OUTGOING CALL, OR FIELD ATTEMPT?

- IC** Incoming - Call
OK Outgoing - Call
FZ Field Attempt
ND Not dialed or attempted - need to exit case

Name	Carl Collins	Partial?		Start date	Wednesday, May 15 2019
Phone	9999991644	REF_DATE	October 2015	End date	Wednesday, July 10 2019
Incentive	\$50	TRI_DATE	October 2018	RACode	C
ID #	0001000001			GROUP	A

Face Sheet

Progress  46%

Navigate : FZ_VISIT 

IS/WAS ANYONE HOME?

- 1 YES
2 NO

Case Result Codes – Mode Specific


14


- Two types of codes in both modes (CATI and Field):
 - ▣ Automatically assigned: codes assigned based on interviewer responses to environmental questions
 - ▣ Interviewer assigned: codes explicitly selected by interviewers from limited list
- CATI-specific case result codes
 - ▣ Associated with rules that specified when the case should be called
 - ▣ Placed cases in the general queue for access by any interviewer
- Field-specific case result codes
 - ▣ Associated with rules that kept cases assigned to the same field interviewer
 - ▣ Removed cases from the interviewer's case list if a final case result code was given (e.g., complete, ineligible, hard refusal, etc.)

Case Result Codes – CATI Mode

15

Name	Mark Mitchell	Partial?		Start date	Wednesday, May 15 2019
Phone	9999992681	REF_DATE	January 2015	End date	Wednesday, July 10 2019
INCENTIVE	\$50	TRI_DATE	January 2018	RACode	C
ID #	0001000003			GROUP	A

Progress  79%

Navigate: 

INTERVIEWER: ENTER CALL DISPOSITION AND CLICK NEXT TO SCHEDULE AN APPOINTMENT OR EXIT SURVEY


- 07 ● 07 - Supervisor referral
- 09 ● 09 - Not dialed - need to exit case
- 10 ● 10 - Respondent - Answering Machine No name
- 11 ● 11 - Respondent - Answering Machine - Respondent Name (first/last/full)
- 13 ● 13 - Respondent - Answering Machine - Different Name
- 14 ● 14 - Respondent - Answering Machine - Other (specify)
- 15 ● 15 - Respondent - Answering Machine - VM not setup
- 16 ● 16 - Respondent - Answering Machine - Mailbox full
- 17 ● 17 - Answering Machine - No Message Left
- 20 ● 20 - CB - Hard appointment
- 21 ● 21 - CB - Soft appointment
- 23 ● 23 - Spoke to R, Call Back
- 24 ● 24 - Respondent - Partial, Hard Appointment
- 25 ● 25 - Respondent - Partial, Soft Appointment
- 30 ● 30 - Respondent - Language Barrier - Spanish
- 31 ● 31 - Respondent - Language Barrier - Non-Spanish
- 34 ● 34 - Respondent - Physically or Mentally unable/Incompetent
- 35 ● 35 - Respondent - Deceased
- 43 ● 43 - Respondent - Not available during survey period
- 48 ● 48 - Respondent - Regular busy
- 49 ● 49 - Respondent - Fast busy
- 50 ● 50 - Respondent - No answer


Case Result Codes – Field Mode

16

Name	Carl Collins	Partial?		Start date	Wednesday, May 15 2019
Phone	9999991644	REF_DATE	October 2015	End date	Wednesday, July 10 2019
Incentive	\$50	TRI_DATE	October 2018	RACode	C
ID #	0001000001			GROUP	A

Face Sheet

Progress  80%

Navigate : INT 

INTERVIEWER: ENTER CALL DISPOSITION AND CLICK NEXT TO SCHEDULE AN APPOINTMENT OR EXIT SURVEY

- 34** 34 - Respondent - Physically or Mentally unable/Incompetent
- 35** 35 - Respondent - Deceased
- 43** 43 - Respondent - Not available during survey period
- CC** CC - Return case to CATI to complete
- 36** 36 - Respondent - Incarcerated
- FB** FB - Respondent - Partial, Hard Appointment
- FC** FC - Respondent - Partial, Soft Appointment
- FP** FP - Respondent - Soft Refusal (phone or visit)
- FQ** FQ - Respondent - Hard Refusal (phone or visit)
- FR** FR - Respondent - Breakoff - Hangup, disconnect, shut door
- G0** G0 - Field Case - Retired
- GW** GW - Alt contact - Breakoff - Hangup, disconnect, shuts door
- GX** GX - Send to tracing
- H9** H9 - Field Manager Review
- ND** ND - Field - Not Dialed

Discussion

17

- System benefits
 - ▣ Complex call cycling rules for CATI
 - ▣ Seamless case movement across modes
 - ▣ Mode-specific case management rules
- System drawbacks
 - ▣ Difficulties reviewing cases at the supervisory level
 - ▣ Problems locking cases into a specific mode,
 - ▣ Inefficiencies in applying programming edits
 - Changes needed to be made independently to each mode
 - ▣ Field bandwidth issues running VPN

Next Steps

18

- Development of more advanced case management rules
 - ▣ Control the flow of cases across modes more precisely
- Identification of additional paradata to be captured for each mode
 - ▣ Make reporting more comprehensive and accessible
- Development of additional safeguards
 - ▣ Prevent cases from being incorrectly assigned to the wrong mode

Question & Answers

