

Challenges in Converting the National Crime Victimization Survey to Blaise

Charlie Carter

Roberto Picha

Technologies Management Office

Introduction

- The National Crime Victimization Survey is one of many household based surveys developed at the Census Bureau.
- The survey collects crime data for every household member who is age 12 and older.

Introduction

- When compared to other household based surveys administered at the Bureau...
 - ❑ CE 1 Respondent
 - ❑ AHS 1 Respondent
 - ❑ NHIS 3 Respondents
 - ❑ NCVS Every eligible household member
- Because of the number of eligible household members, whenever the interviewer exits and re-enters the instrument to complete someone's crime report, we are required to retrieve any partial data already collected for that person.

Introduction

- NCVS has a sample size of about 56,000 households that are interviewed a total of 7 times during a 3 year period.

Introduction ... Survey Challenges

- Challenge # 1
 - Developing an approach for collecting multiple crime reports for every eligible household member.
- Challenge # 2
 - Developing an approach for comparing all the reported crimes across all household members to ensure that there are no duplicates.

Introduction ... Survey Challenges

- Challenge # 3
 - Integrating an Editing and Coding Instrument into the regular data collection instrument.

Was your credit card illegally used in the last 6 months?



Challenge #1: Collecting Multiple Crime Reports

- Screener questions asked about number of incidents within the reference period.
- Respondent can report up to 30 incidents for each of the 10 screener questions “crime categories” (such as personal theft, auto theft, assault, and so on).
- Detailed crime reports are then collected for all crimes mentioned in the Screener questions.

Collecting Multiple Crime Reports: Initial “Brute-Force” Approach

- Arrayed block for up to 30 Household members.
- Each person-level block contained an arrayed block for the 10 crime categories.
- Each crime category block contained an arrayed block for up to 30 crimes.
- 9,000 nested blocks (30 * 10 * 30).

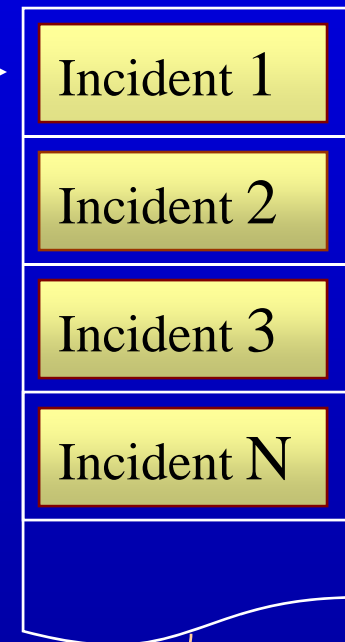
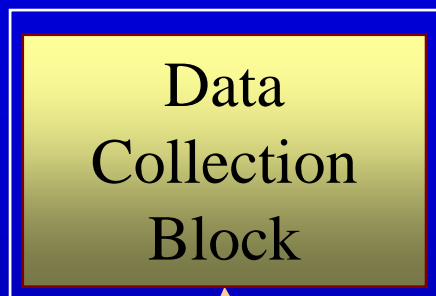
Collecting Multiple Crime Reports: Results of “Brute-Force” design

- Exceeded 16,300 Blaise page limit – failed to compile;
- Reducing nested blocks
 - Load time of 45 seconds;
 - Navigation lag of 2 seconds;
 - Too many arrayed blocks on route;

Collecting Multiple Crime Reports: Solution

Data Storage Array

Data collected in one straight block



Data collection block is
EMPTY, and questions
are re-asked

Flags and counters are used to track and link
the storage arrays to enable retrieval and
processing

Was any item taken from your pocket?



Challenge #2: Un-duplication

- Comparing crime reports that were collected during interview.
- Two kinds of Un-duplication
 - ❑ Un-duplication of current crime reports.
 - ❑ Un-duplication with previous crime reports.

Un-duplication Challenges

- Retrieving crime report data from a storage array.
 - “Length of data for one block exceeds 65519 positions.”
- Formatting the data so reports are readable to the interviewer.
 - Side-by-side comparison.

Un-duplication Process and Structure

- ◆ Compare the incident data below. Do not discuss incidents with the respondent.
- ◆ Is the incident on the left a duplicate of the incident on the right?

INCIDENT REPORTED DURING CURRENT ENUMERATION
Enum: 02 Ln No: 1 Inc. No: 2

MONTH: 2
WHERE: In own dwelling/att garage.
Respondent and other HHLd member(s) present
WEAPON: Blunt object,
THREATEN: Weapon present,
NOTHING TAKEN AND NO ATTEMPT TO TAKE ANYTHI
SUMMARY: offender tried to break into house
, was warned off, police called, offender fou
nd 2 days later, replaced door

INCIDENT REPORTED DURING CURRENT ENUMERATION
Enum: 02 Ln No: 2 Inc. No: 4

MONTH: 2
WHERE: On street.
Respondent was present.
WEAPON: Knife,
ATTACK: Stabbed/cut w/ knife,
THEFT: Cash, Wallet, Credit cards,
SUMMARY: mugged in parking lot of mall, cut o
n arm defending self, stitched at hospital, w
allet found hours later

- Rows are all crimes reported by all respondents.
- Columns are crimes reported by the current respondent.

1. Yes
 2. No

	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum	Undup Cur Enum
Incident[1]			1						
Incident[2]			2						
Incident[3]									

Un-duplication Solutions

- Transferring crime data.
 - ❑ Instead of parameters, create the report display at a higher block level.
 - Did not exceed block limits.
 - Able to re-use text fills.
- Displaying the data for comparison.
 - ❑ Concatenated data and a string buffer up to 45 characters per line of each report.

Challenge #3: Editing & Coding

Editing and Coding (E&C) is the process of reviewing data that was collected during interviewing for quality assurance.

Criteria which determined whether the E&C instrument would be called depended on...

Editing & Coding

1.- When at least one member had a race category equal “6- other” during the first time the case was interviewed . . .

National Crime Victimization Survey -- NCVS Questions ver 14.02

Forms Answer Navigate Options Help Show Watch Window

Main | HH Roster | FAQs | Incident Review

LNO	NAME	REL	ORG	RACE	RACE SPECIFY
1	Ray Ray	Ref Person	No	1	
2	Teresa Ray	Wife	No	1	
3	Junior Ray	Son	No	1 6	Greek

1. White
 2. Black or African American
 3. American Indian or Alaska Native
 4. Asian
 5. Native Hawaiian or Other Pacific Islander

**Race = 6 (Other)
re-classification**

	Race	Review Catchall1	Review Catchall2
2	Teresa Ray		
3	Junior Ray		

0000001 | RACEROSTER_EC | 8:40:22 AM | 6-12-2007 | Talking To: | About: Ray Ray | 289/1492

Editing & Coding

2.- When at least one member had responded “Yes” to the called police crime *or* not called police crime questions regarding a potential crime.

National Crime Victimization Survey -- NCVS Questions ver 14.02

Forms Answer Navigate Options Help Show Watch Window

Main | HH Roster | FAQs | Incident Review

? [F1]

CATCHALL QUESTIONS **2**

- Incident Description: **bike stolen from neighbor's yard**
- Select up to 3 precodes, separate with commas

<input type="checkbox"/> 11. Rape	<input type="checkbox"/> 21. Motor Vehicle Theft
<input type="checkbox"/> 12. Attempted Rape	<input type="checkbox"/> 22. Attempted Motor Vehicle Theft
<input type="checkbox"/> 13. Robbery	<input type="checkbox"/> 23. Motor Vehicle Accident
<input type="checkbox"/> 14. Attempted Robbery/Threatened Robbery	<input type="checkbox"/> 24. Vandalism (Against Household or Household Member's Property)
<input type="checkbox"/> 15. Assault	<input type="checkbox"/> 25. Prowlers/Peeping Toms
<input type="checkbox"/> 16. Attempted Assault/Threatened Assault	<input type="checkbox"/> 26. Crime Against Household, Other than above
<input type="checkbox"/> 17. Burglary	<input type="checkbox"/> 27. Not a Crime
<input type="checkbox"/> 18. Attempted Burglary	<input type="checkbox"/> 28. Crime Against Someone Else or Society
<input type="checkbox"/> 19. Larceny (Household or Personal)	<input type="checkbox"/> 29. Unable to Classify
<input type="checkbox"/> 20. Attempted Larceny (Household or Personal)	

	Race	Review Catchall1	Review Catchall2
2	Teresa Ray		
3	Junior Ray	1,2,3,4,5	

00000001 CATCHALL2_EC 8:41:38 AM 6-12-2007 Talking To: About: Ray Ray 289/1492

Editing & Coding

3.- There were one or more crime incidents reported in the household at time of interviewing either [CATI] and/or [CAPI], screener information at the person level .

◆ Enter the precode to select the next incident to edit or enter 31 if finished editing all incidents

L	I	S	REF	WHAT
N	N	T		
O	C	A	CODE	HAPPENED
1	1	1	P	flower pot stolen

List of Crime Incident Reports for the household

... table that arrayed the maximum 30 crime report incidents that matched incidents to the person number and line number

Review incident roster

00000001 INCROSTER_EC 8:42:03 AM 6-12-2007 Talking To: About: Ray Ray 291/1492

Editing & Coding: Challenge

- Using NCVS as E&C presented serious issues for routing questions
- Populating E&C blocks with same data from the demographics and crime report.
 - ❑ “Exceeded the record length size allowed of 32767.”
 - ❑ Nested blocks
- “Load time was greater than 60 seconds.”
 - ❑ When reducing amount of nested blocks.

Editing & Coding: Solution

- Updating E&C block (separate E&C block).
 - ❑ Screens to check race for HH and call police
 - ❑ Arrayed as Crime Report Storage data to include only those variables needed from reviewing data
 - Retrieval of Crime report for reviewing and editing was simpler
- Populate E&C component via Manipula script.
 - ❑ Most efficient mode to update E&C blocks without tying up resources

Conclusion: Lessons Learned

- ❑ Separate the data collection activities from the data storage when there are multiple respondents that are being asked the exact same series of questions.
- ❑ Develop the E&C instrument as a separate instrument instead of integrating it into the regular data collection instrument.

Dan reported missing...

