Converting the American Housing Survey
Blaise 4 instrument to Blaise 5

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Topics

- Introduction to the AHS Blaise 4 Instrument
- Goals for the migration of the AHS to Blaise 5
- Challenges
- Other areas we looked into
- Conclusions
Introduction to the AHS Blaise 4 Instrument

• Current mode is CAPI
  • Collects data on Housing Quality and costs
    • Physical conditions of nation’s housing units
    • Indicators of housing and neighborhood quality
    • Home improvement activities and costs
    • Mortgage, rental and utility costs
  • Demographic characteristics
• In production using Blaise 4 for 8 years, large complex survey
Goals of the migration for the conversion of the AHS into Blaise 5

• Determine Level of effort required to convert from B4 to B5
  • Steps in the use of the conversion tool
• Attempt conversion with minimal changes to original code
  • Would this be even possible?
• Effort to deploy in a Browser (IE and Firefox)
• Blaise 520.1171 was used first. Final version used Blaise 5.3.0.1517
Level of effort Migrating to B5 - steps

• Conversion tool
  • Conversion of the instrument
  • Conversion of the external files used by the instrument
  • Conversion of the Manipula scripts used around the instrument
    • The setup script to load cases.

• Adjustments to final solution, conversion created several solution
  • Main solution (inst)
    • External solutions as project
  • Solution adjustment
Challenges

"WHEN FACED WITH A CHALLENGE, LOOK FOR A WAY NOT A WAY OUT."

DAVID WEATHERFORD
Challenges encountered along the way

• Blaise 5 – Default templates with no changes
  • Look and feel were far different from original Blaise 4
  • Fills were not displayed properly

• Questions did not come on route as expected (delayed)
• Demographic block busy and hard to navigate
Challenges encountered along the way (cont.)

• Blaise 4 – Existing Code Challenges
  • Redundancy in the code
  • Different styles in the code
  • Lack of parameterization
  • Fully Qualified References
  • Data Processing output with Instrument
Challenges encountered along the way (cont.)

• Blaise 5 changes required
  • Need to modify code to function as in Blaise 4
    • Usage of procedures and function
    • Constructing fills into new format for Blaise 5
    • Proper parameterization – Remove dot notation
  • Goal was to use “out of the box” templates, but new templates needed
    • Master template
      • Phone templates
      • Address data template
      • Two dimensional template (Blaise 4 table)
    • Group templates
      • Group templates were displaying all questions on route / should not have
  • Layout for CAPI and WEB
Challenges encountered along the way (cont.)

- Master template to be used for our survey
  - Header Template
    - Containing the survey name & Language navigation
  - Parallel Tabs
  - Central panel for data collection
  - Navigation push buttons
    - Navigation forward / backward & Home / End option
  - Status Bar
    - Display information: caseid, variable name, respondent name
The template would render for regular CAPI laptop Interviewer.
The template would render for a web layout for interview.

- The usage of push buttons instead of radio buttons.
- Push button as default.
- Push buttons default width were used.
Challenges encountered along the way (cont.)

Phone templates

- The instrument could collect from one to up to five pieces of information
- Phone Number composed of 10 character long
- Collected in 3 variables or collected in one variable
- Extension number
- Phone type

Please enter your phonenumber
Current phone number:

(123) 456-7890
Challenges encountered along the way (cont.)

Address layout

• Two address groups
  • Physical address
  • Mailing address

• Main characteristics
  • Address displayed in the header opposed to address displayed in each question in Blaise 4
  • Easy to read

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### American Housing Survey -- Version 7.38

#### Mailing Address House Number

<table>
<thead>
<tr>
<th>Physical Address</th>
<th>Labels</th>
<th>Mailing Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>12345</td>
<td>House Number</td>
<td>12345</td>
</tr>
<tr>
<td>Building 2</td>
<td>House No. Suffix</td>
<td>Building 2</td>
</tr>
<tr>
<td>my road</td>
<td>Street Name.</td>
<td>my road</td>
</tr>
<tr>
<td>2B</td>
<td>Unit Designation</td>
<td>2B</td>
</tr>
<tr>
<td>turn right out the elevator</td>
<td>GQ Unit Descrip.</td>
<td>turn right out the elevator</td>
</tr>
<tr>
<td>my_wonderful_area</td>
<td>City</td>
<td>my_wonderful_area</td>
</tr>
<tr>
<td>53</td>
<td>State</td>
<td>53</td>
</tr>
<tr>
<td>99999</td>
<td>Zip Code</td>
<td>99999</td>
</tr>
<tr>
<td>99999</td>
<td>Zip Code Ext.</td>
<td>99999</td>
</tr>
</tbody>
</table>
Challenges encountered along the way (cont.)

Trouble with Group templates

• Group templates did not hide questions off route
• All questions were displayed at once

Work around

• Code changes were required to accomplish proper questions to be asked
• ASK and SHOW resolved the problem.

RULES

```plaintext
/// * RPV applying SHOW to variables as this is using a table template
// and does not render well in hiding variables off route.

IF 1PHONENUM = EMPTY THEN
    TELHH.ASK
ELSE
    TELHH.SHOW
ENDIF

IF TELHH = Yes THEN
    TELAND
ELSE
    TELAND.SHOW
ENDIF

IF TELHH = Yes OR 1PHONENUM <> EMPTY THEN
    TELIN
ELSE
    TELIN.show
ENDIF

IF TELHH = NO OR TELHH = DK OR TELHH = RF THEN
    TELAV
ELSE
    TELAV.show
ENDIF

IF TELAV = YES THEN
    TELWHR
    TELCELL
ELSE
    TELWHR.show
    TELCELL.show
ENDIF

ENDGROUP
```
Challenges encountered along the way (cont.)

• Answer list for WEB layout did not hide empty push buttons
• Maybe needs some tweaking
• Answer list for CAPI layout hid empty radio buttons
• Phone contact information for this household.

If we need to contact you by telephone to followup on missing data, is there a telephone in this house?

- YES
- NO

Is there a land-line telephone in this house? Do not count cellular phones, or any phone line that is used only for a computer or fax machine.

- YES
- NO

Is a telephone interview acceptable?

- YES
- NO

Is there a telephone elsewhere on which people in this household can be contacted?

- YES
- NO

Where is the phone located?

How many adults (age 18 and over) in this household have a cell phone for personal use?
AHS Blaise 4 vs Blaise 5 Screen Example

Is 105 22 BEACH RD main a house, an apartment, a manufactured/mobile home, or some other type of residence?

- House
- Apartment, flat
- Manufactured/mobile home
- HU in non-transient hotel, motel, etc.
- HU, permanent in transient hotel, motel
- HU in rooming house or boarding house
- Boat or recreational vehicle
- Tent, cave, or railroad car
- HU not specified above, specify
- Unoccupied site for manufactured/mobile home, trailer, or tent

Group Quarters
In Blaise 5 we decided to use group with the following changes:

- Drop down list to display enumerated answers
- No question text for each question
- For larger content table (horizontally) Interviewer may get lost

<table>
<thead>
<tr>
<th>Ino</th>
<th>Name</th>
<th>SEX</th>
<th>Relationship</th>
<th>Ver Age</th>
<th>BirthM</th>
<th>BirthD</th>
<th>BirthY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>John Doe</td>
<td>Female</td>
<td>Select a value</td>
<td>Yes</td>
<td>November 17</td>
<td>1962</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Jane Doe</td>
<td>Male</td>
<td>Adopted son or daughter</td>
<td></td>
<td>February 1</td>
<td>1980</td>
<td></td>
</tr>
</tbody>
</table>

So Jane Doe is now 38 years old.

Is this correct?
- If yes, suppress and continue.
- If no, go back and correct.
<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Sex</th>
<th>REL</th>
<th>AGE</th>
<th>Origin</th>
<th>Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>John Doe</td>
<td>Female</td>
<td>Select a value</td>
<td>55</td>
<td>No</td>
<td>White, Black or African</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>American Indian or Alaska</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Native Hawaiian or other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pacific Islander</td>
</tr>
<tr>
<td>2</td>
<td>Jane Doe</td>
<td>Male</td>
<td>Son or daughter</td>
<td>38</td>
<td>No</td>
<td>White, Black or African</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>American Indian or Alaska</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Native Hawaiian or other</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pacific Islander</td>
</tr>
</tbody>
</table>

Field Name: ORIGN  Respondent Name: John Doe  INCSAM: CONTINUING CASE
Other areas of Blaise 5

- Setting of a Blaise server to deploy the AHS instrument
  - Server Manager, Roles
- Data Output XML
  - Format
- Audit trail XML output
  - Usage for current process
- API
  - Learning and usage for our instrument
- Android & iPhone SDK
  - Needs some help in setting the development environment
Conclusions

• Increased Blaise 5 knowledge / Learning Curve
• Gained understanding of level of effort
• For converting complex instruments into B5 maybe feasible to rewrite from scratch as opposed to modify existing code
• Learning curve for our stakeholders to adapt the new way to administer questions.
• Expanded understanding of requirements for setting up in a server environment
Questions / Comments…

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