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Statistics Canada's CAPI Monitoring Project: A CARI Pilot using Blaise's CARI implementation

Gilles Vautour
Statistics Canada
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Outline of Presentation

1. Statistics Canada
2. Introduction - CARI
3. CARI at Statistics Canada
4. CAPI Monitoring Project
5. Technical Design and Development
6. Challenges and Limitations
7. Next Steps – The Future



Statistics Canada

Statistics Canada

- Canadian Federal Government's central statistical agency
- Population & Agricultural census
- Social surveys
- Business surveys
- Institutional surveys
- CAPI
- CATI

Introduction - CARI

- **CARI = Computer-Assisted Recorded Interviewing**
- **Background Information**
 - Data quality
 - Questionnaire design
 - Monitoring
- **CARI Implementations (past & present)**
 - Research Triangle Institute (RTI)
 - US Census Bureau
 - University of Michigan
 - Australian Bureau of Statistics
 - Blaise 4.8.2



CARI at Statistics Canada

History

2008 CCHS - CAPI Monitoring Pilot

- Canadian Community Health Survey
- RTI Approach
 - Blaise Alien Router
 - Visual Basic ActiveX dynamic link library (dll)
 - Blaise Component pack
 - Wave File output
- Pilot Test – November 2008



CARI at Statistics Canada

Currently @ Statistics Canada

2010 CCHS - CAPI Monitoring Project (using Blaise's CARI implementation)

- CARI enabled Canadian Community Health Survey
- Blaise 4.8.2 for the recording component
 - Wave audio output
 - JPG screen output
- In-house playback management module
 - VB .Net
 - SQL Server
- Phase in – May 2010



CAPI Monitoring Project

- Objectives:
 - Measure field interviewer performance
 - Improve data quality
 - Improve questionnaire design

- Methodology:
 - Audio recording
 - Screen capture
 - Formal monitoring strategy and feedback process

CAPI Monitoring Strategy

- Record snippets of interviews
 - Easy and difficult question blocks, including entry/exit
- Transmit audio files daily from the field to head office
- Monitor
 - Listen to files based upon a sampling plan, assessing interaction between interviewer and respondent
 - Note poor interviewing practices or errors, as well as positive techniques
- Produce reports and provide feedback

CAPI Monitoring Plan

- Recording:
 - consent question
 - 7 pre-identified blocks of questions (representative of interviewer skills) with maximum time of 8 minutes total
- Transmission back to HQ over 3G/HSPA (encrypted and compressed)
- Planned for approximately 600 expected respondents from 5 sites across Canada
- Approximately 25 interviewers, 3 monitors

Technical Design and Development

- RTI solution from 2008 Pilot
 - Audio only
 - No Screen image
 - Difficult to assess performance
 - Interference with lookup tables
 - Performance issues – “field flicker”



Technical Design and Development

- Initial Proposed Solution
 - Use Blaise 4.8.2's CARI implementation for recording and playback of audio and image files
- Proof Of Concept
 - Verify functionality of Blaise 4.8.2's CARI implementation for recording and playback



Pros and Cons – Blaise 4.8.2

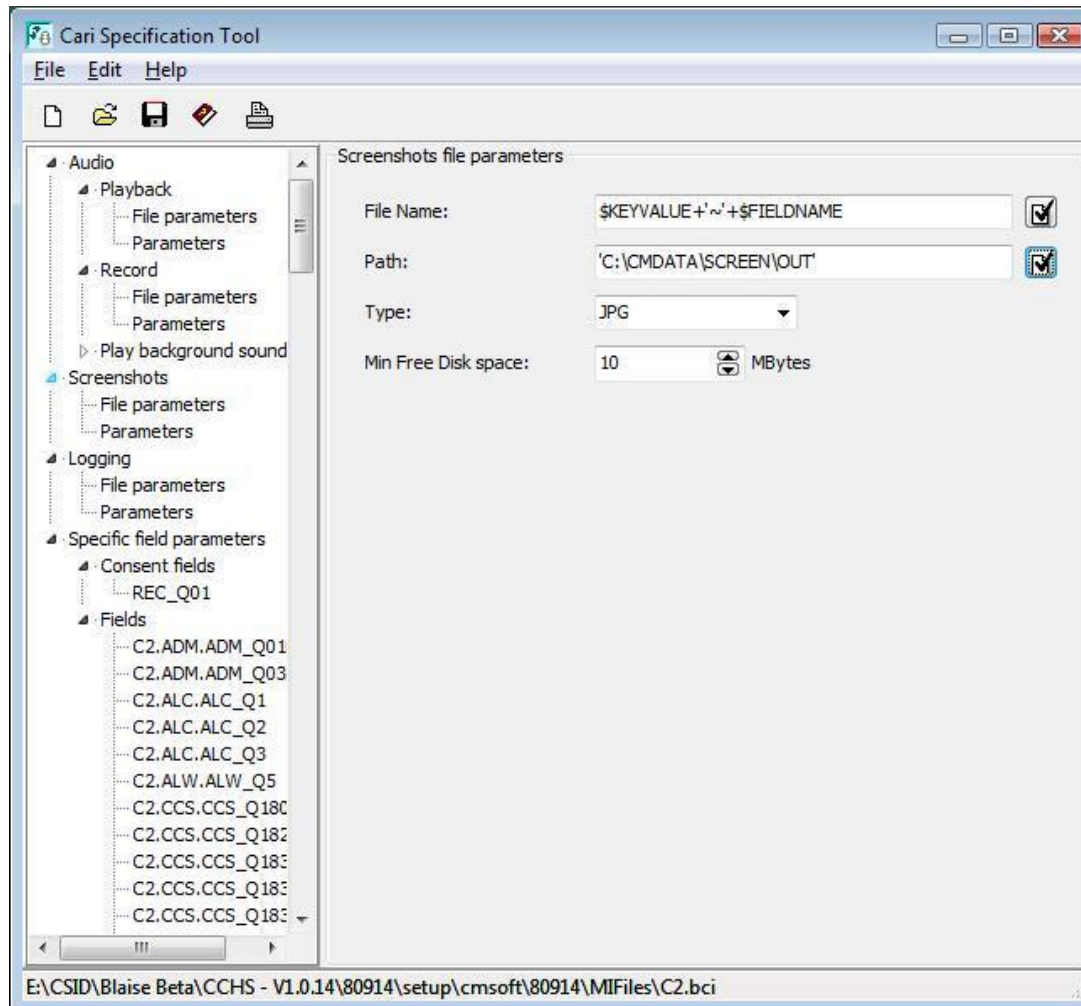
- Pros
 - Use of generic tool – fast turn around
 - Use of configuration files
 - Very little programming – (from a collection application point of view)

- Cons
 - Limited by constraints of the Blaise CARI implementation
 - Limited control during playback

Implemented Solution

- Recording Component
 - Blaise 4.8.2
 - Post-processing of output audio and screen files
 - Files renamed, compressed and packaged for transmission
 - Generic application can be re-used as is for other surveys
- Playback Component
 - In-house built application
 - VB .Net
 - SQL Server
 - Only available to Monitors – interviewers do not have access
 - Blaise's playback option lacked required abilities/features
 - Detailed control of playback
 - Separation of data from playback environment

Blaise's CARI Specification Screen





The Consent Question

Blaise 4.8 Data Entry - C:\CMData\80914\TRAIN\1202391247\CONTACT_00\CONTACT

Forms Answer Navigate Options Help

Contact

REC_Q01

Some of this interview may be recorded for the purpose of quality control. Do you agree to being recorded?

1. Yes

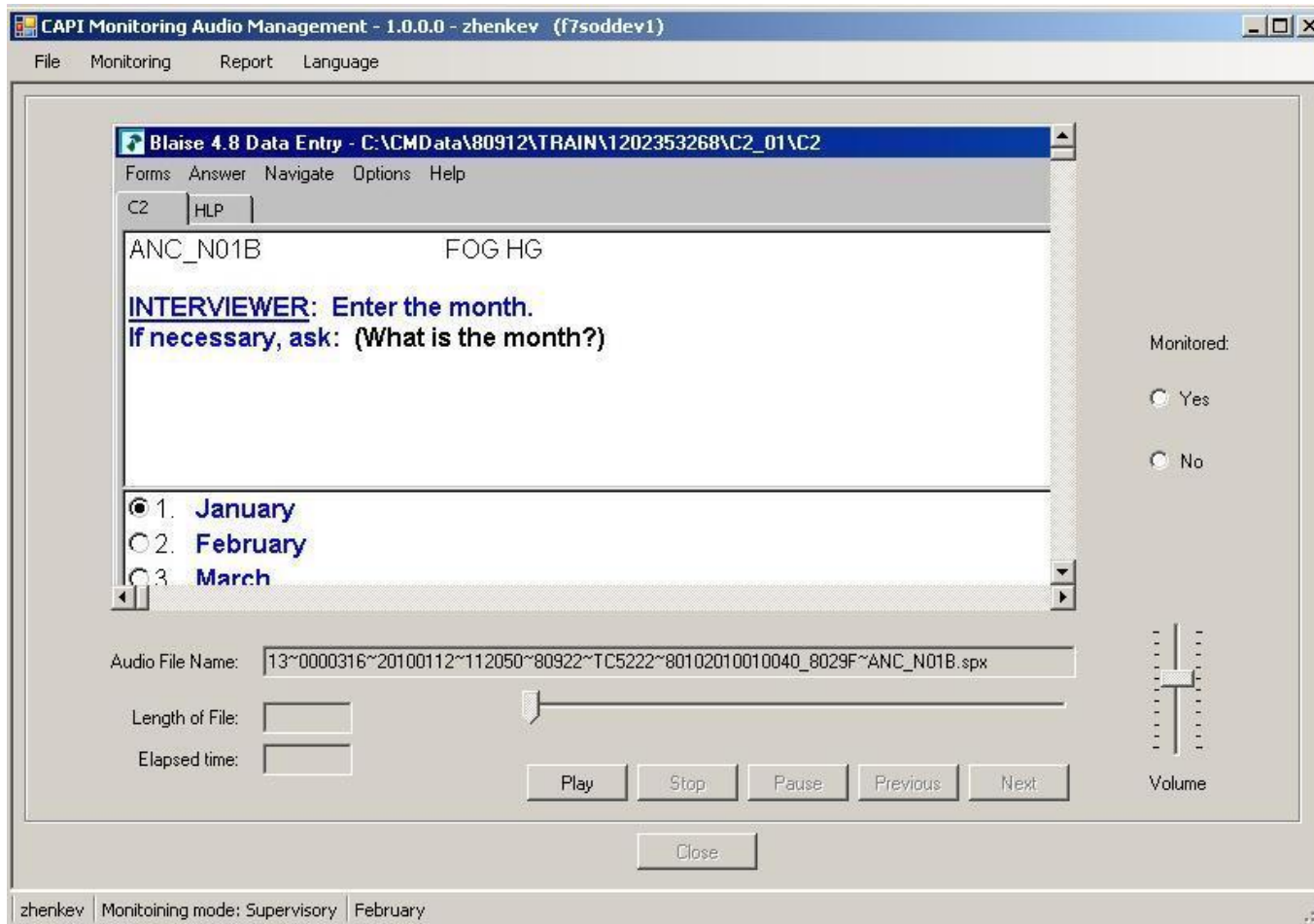
2. No

IC_R01

REC_Q01 1



Statistics Canada's Player



Challenges and Limitations

- Multiple data models within a collection vehicle
 - CCHS has 4 data models – standard CAPI design at Statistics Canada
- Consent field
 - CCHS has a consent field per data model
 - Consent only asked once (at the end of the first data model)
 - Consent in other models is not displayed - used to control recording
 - Explicitly test for consent to start/stop recording
- Compiled with Blaise 4.6 – only DEP from 4.8.2 used
- Potential performances issues
- Size limitation
 - Laptop computers in the field
 - Limited transmission capacity back to HQ
- Developed using beta version of the Blaise CARI implementation



Next Steps – The Future

- CCHS CARI currently in final stages of testing
- Production with CCHS in May 2010
- Phase in full CCHS sample by December 2010
- Plan to have other CAPI surveys incorporate CARI starting Fiscal Year 2010/2011
- Potential link of player module to QA system



Questions



- What to do if respondent withdraws consent during interview?



Contact

Gilles Vautour
Project Leader – SMCS & Common Tools
Collection Systems and Infrastructure Division
Statistics Canada

Email: gilles.vautour@statcan.gc.ca