Questionnaire Specifications Database (QSD) for Blaise Surveys

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Questionnaire Specifications Database (QSD)
- Streamlines the process of creating Blaise instruments
- Allows iterative changes at any point in development
- Produces specification documents
- Supports Audio Computer Assisted Self-Interview (ACASI)
- Tracks changes
Changing Requirements

Clients → Managers

Methodologists

Survey Specialists

Review Boards

Programmers

QSD

Quality Assurance

Translators
Overview of QSD

- User interface and business rules database
- Back end relational database
- Each survey team uses a dedicated instance of QSD
- User Levels
  - Standard user
  - Questionnaire spec writer
  - Questionnaire programmer
User Interactions

- Spec writers and translators make iterative changes to the specifications
- Programmers load specs from a document and automatically create files with modules, types, and fills
- Programmers export the changes into the Blaise code
- Programmers create scripts for audio files and generate Blaise code to play them
- All staff monitor changes made during development of the Blaise survey
System flow

Specifications

Module A
Module B
Module C
Module D
Module ...

QSD

Project Info
Instruments
Modules
Items (Questions)
Types
Types Categories
Fills
Fills Categories
Sound Files
Specs Changes
Comments

Blaise Instrument(s)

Once:
Rules Section

Many times:
Fields
Types
Fills

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Each entry is logged with a username and timestamp

- Add new question
- Delete question
- Change text (question, response option, fill)
- Change skip logic
- Problems and comments
  - Info about skip logic changes
  - Request to add new response option or fill
  - Problem found in testing
Quality Assurance

Verifying Changes

- Item level
- Module level

Version Control

- Version the Blaise instrument
- Label in source control (Blaise code)
- Version the exported specifications document
QSD Main Screen

Select Module

DEMO Version

Please select Instrument and Module names from the dropdown list.

Instrument Name: Demonstration Survey

Module Name: GI-General Information

- Questionnaire
- RCD Developers
- Exit

- Preview Specs for Module
- Preview Specs for Instrument
- Save Specs for Module in a File
- Save Specs for Instrument in a File

- Verifying Changes to Modules
- Changes to Comments by Module
- Changes to Specs by Questions
- Changes to Comments by Date

- Edit or Add New Module
- Preview Types for All Instruments

Manage Translation
**General Information**

**Logic before:**
IF GI\_work=\text{yes} then ask GI\_org

**GI\_org**
[GI\_\text{2}] how often appreciated by people or leader

How often \text{\textsuperscript{^\text{Fill}}GI\_\text{org\_1}} by the leaders or people of your organisation for the work and activities of \text{\textsuperscript{^\text{Fill}}GI\_\text{org\_2}} at your organisation?

**Question Type:** \text{NotSomeVeryAll}

\begin{itemize}
  \item NotAtAll 1 Not at all
  \item Sometimes 2 Sometimes
  \item Often 3 Often
  \item VeryOften 4 Very often
  \item AllTheTime 5 All the time
\end{itemize}

**Question Fill:** \text{\textsuperscript{^\text{Fill}}GI\_\text{org\_1}}

\begin{itemize}
  \item present do you feel you are appreciated
  \item past did you feel you were appreciated
\end{itemize}

**Question Fill:** \text{\textsuperscript{^\text{Fill}}GI\_\text{org\_2}}

\begin{itemize}
  \item present that you do
  \item past that you did
\end{itemize}

**Logic after:**
IF GI\_org = \text{notAtAll} skip to GI\_why
Edit Questionnaire

Question Text:
All things considered, how would you describe your relationship? Would you say it is...

Question Type:
1. Completely unhappy
2. Mostly unhappy
3. Somewhat unhappy
4. Neither happy nor unhappy
5. Somewhat happy
6. Mostly happy
7. Completely happy

Type ID:
1. marriage
2. relationship with your partner
In use for over two years

- More than 10,000 questions among 26 instruments across several studies
- Case Study: 442 changes logged in a single day - new version was ready for testing the same evening
- Change distribution

Data log from four recent bilingual studies
Conclusion

Advantages of QSD

- Specs-Instrument synchronization
- Programmers focus on logic rather than question wording
- Addition of a second language without programmer intervention
- Extensive support for ACASI

Future development

- Web interface
- Optional use of SQL Server for the back end database

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