

*turning knowledge into practice*

# Questionnaire Specifications Database (QSD) for Blaise Surveys

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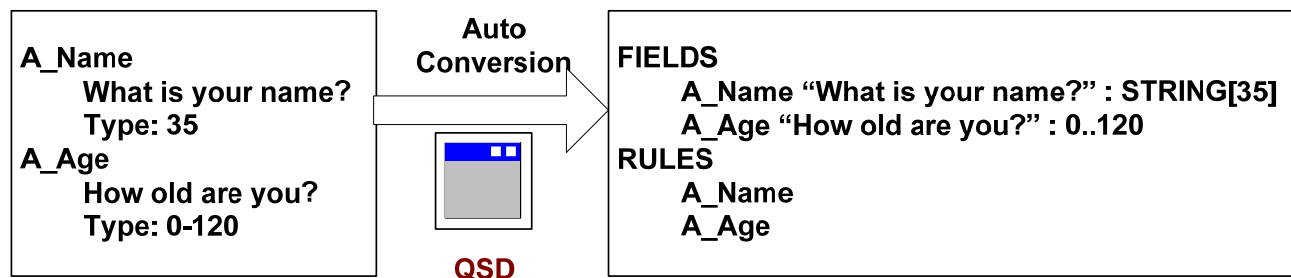
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# Introduction

## Questionnaire Specifications Database (QSD)

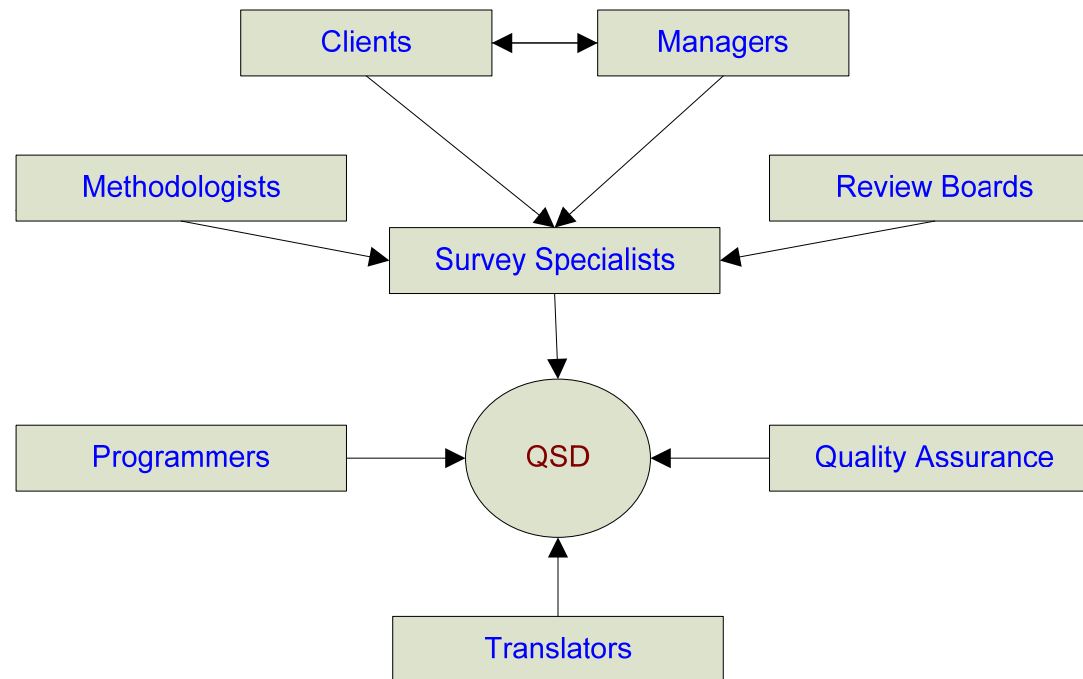
- Streamlines the process of creating Blaise instruments
- Allows iterative changes at any point in development
- Produces specification documents
- Supports Audio Computer Assisted Self-Interview (ACASI )
- Tracks changes



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# Changing Requirements



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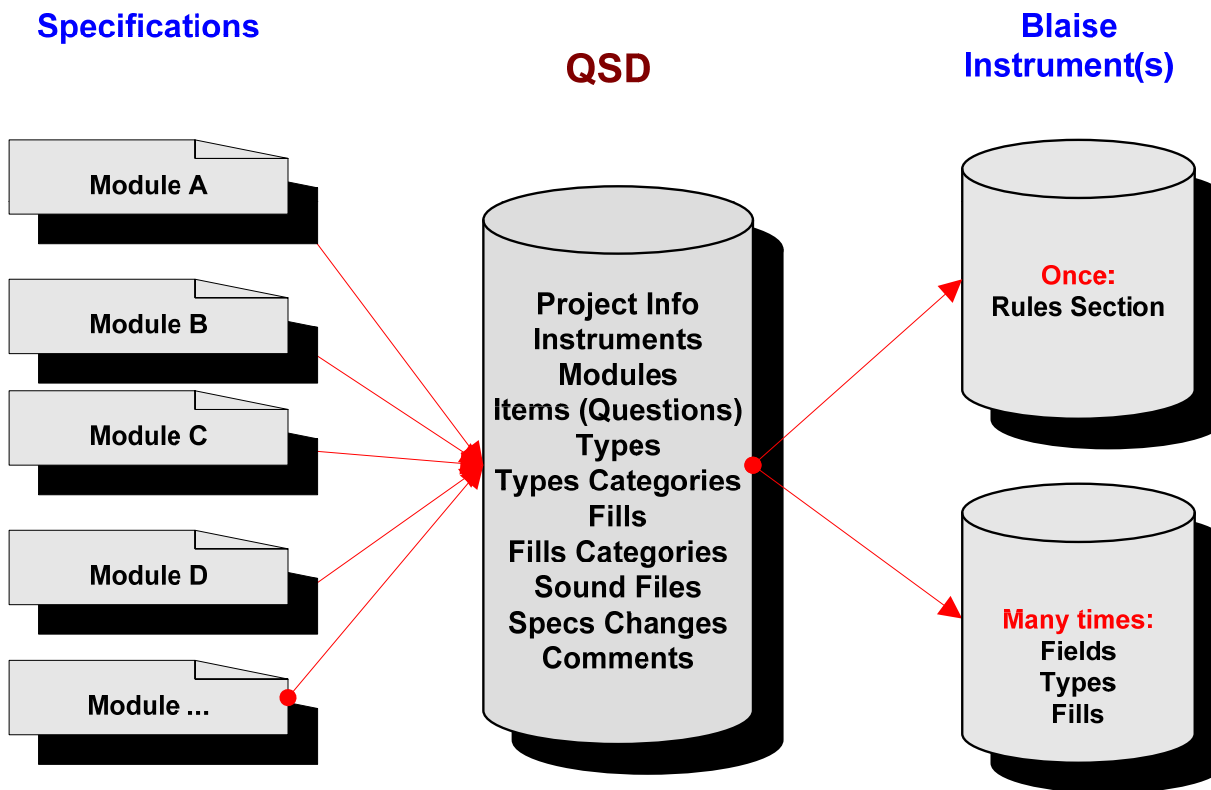
# Overview of QSD

- 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



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# Logging Changes

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

# Login to QSD

**DEMO Version**  
Login to Questionare Specifications Database

User NT login

Password

# 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

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# Preview Specs for Module

**Module Questions**

*General Information*

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

**GI\_org**                      *[ GI2 ] how often appreciated by people or leader*

How often ^Fills.GI\_org\_1 by the leaders or people of your organisation for the work and activities  
^Fills.GI\_org\_2 at your organisation?

**Question Type:**    *TNotSomeVeryAll*

NotAtAll	1 Not at all
Sometimes	2 Sometimes
Often	3 Often
VeryOften	4 Very often
AllTheTime	5 All the time

**Question Fill:**    *^FillGI\_org\_1*

present	do you feel you are appreciated
past	did you feel you were appreciated

**Question Fill:**    *^FillGI\_org\_2*

present	that you do
past	that you did

**Logic after:**  
IF GI\_org = notAtAll skip to GI\_why

# Edit Questionnaire

**Edit Questionnaire**

Instrument:  **Add** **Delete** **Module Flow** **Exit**

Module:  **Move** **Delete** **Print Specs**

Question:  **Search**

English Spanish **Edit Skip Logic** **Edit and Translate Question** **Edit and Translate Type** **Edit and Translate Fills** **English Audio** **Spanish Audio**

Question Text Question Label:

All things considered, how would you describe your ^Fill:MarriageRelationship? Would you say it is . . .

Question Type	Number	Text	Identifier
<b>TCompUnhToH.</b>	1	Completely unhappy	CompUnh
	2	Mostly unhappy	MostUnh
	3	Somewhat unhappy	SomeUnh
	4	Neither happy nor unhappy	Neither
	5	Somewhat happy	SomeHp
	6	Mostly happy	MostHp
	7	Completely happy	CompHp

Question Fill(s)

TypeID:	CatIdentifier	CatN	CatText
<b>TFillMarriageRe</b>			
TFillMarriageRela	marriage	1	marriage
TFillMarriageRela	relatnshp	2	relationship with your partner

Record:  of 12 (Filtered)

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# Test Audio Files

**Edit Questionnaire**

Instrument:  **Add** **Module Flow**  
 Module:  **Move** **Delete** **Print Specs** **Exit**

Question:  **Search**

English Spanish Edit Skip Logic Edit and Translate Question Edit and Translate Type Edit and Translate Fills English Audio Spanish Audio

**Play Wave File**

**English Text** **Log Problem**

All things considered, how would you describe your

All things considered, how would you describe your ^Fills.MarriageRelationship? Would you say it is . . .

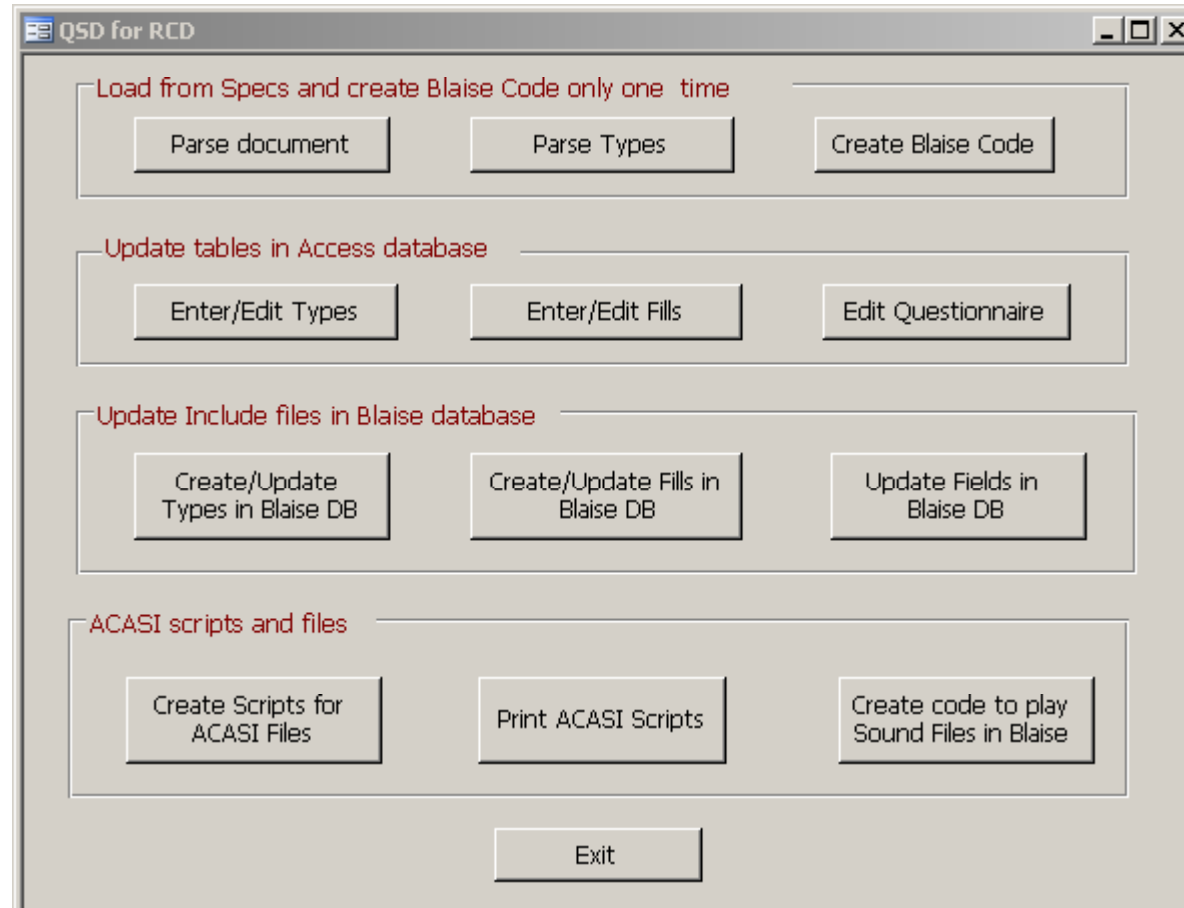
Question Type	Number	Text	Identifier
<input type="checkbox"/>	1	Completely unhappy	CompUnh
<input type="checkbox"/>	2	Mostly unhappy	MostUnh
<input type="checkbox"/>	3	Somewhat unhappy	SomeUnh
<input type="checkbox"/>	4	Neither happy nor unhappy	Neither
<input type="checkbox"/>	5	Somewhat happy	SomeHp
<input type="checkbox"/>	6	Mostly happy	MostHp
<input type="checkbox"/>	7	Completely happy	CompHp

Record:  of 12 (Filtered)

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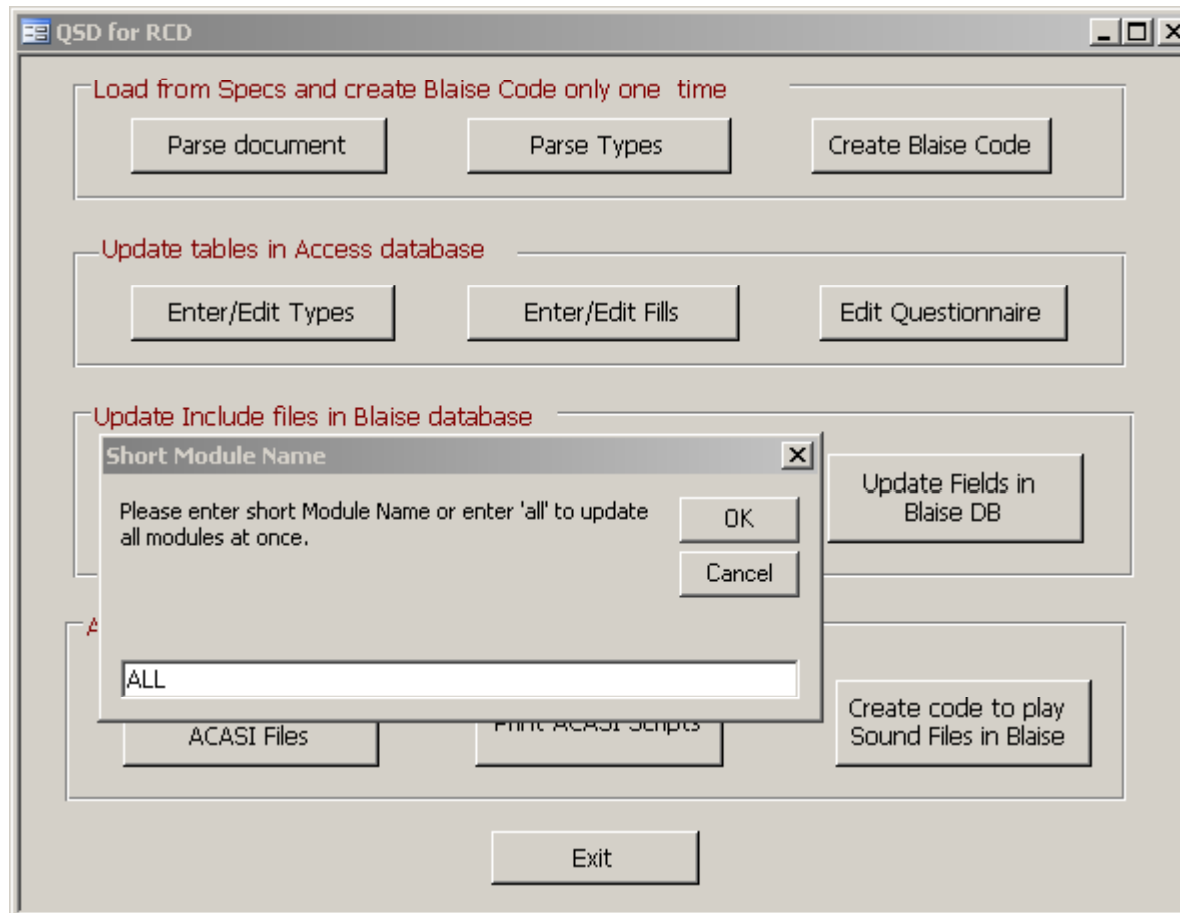
# QSD for Programmers



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# Update Fields in Blaise DB



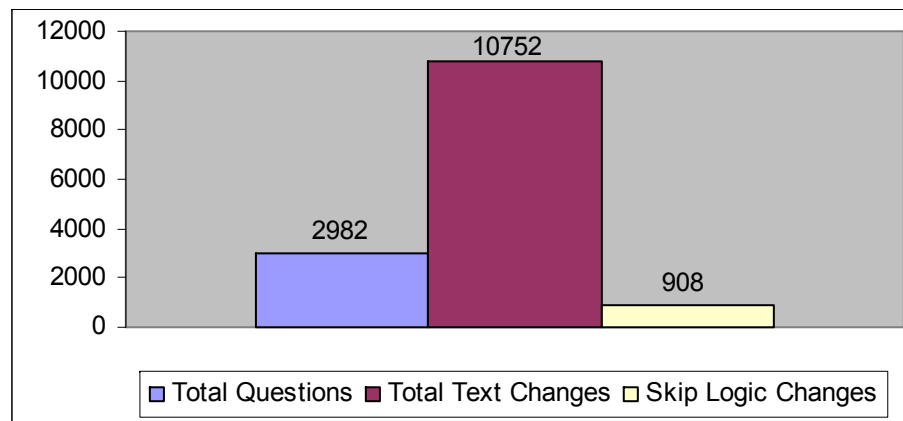
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# QSD at RTI International

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

# Acknowledgement

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