



# Extending Blaise Capabilities in Complex Data Collections

International Blaise Users Conference

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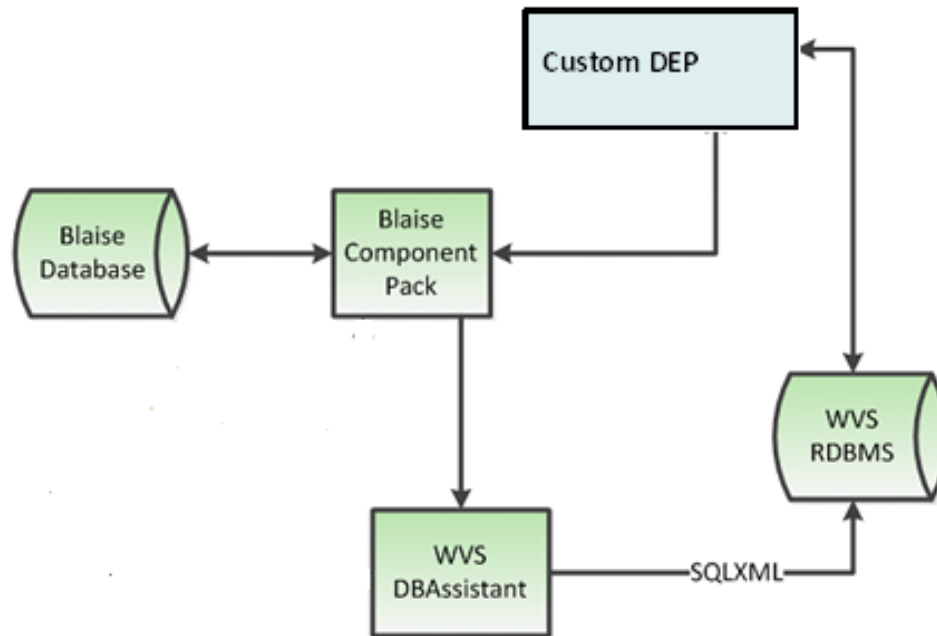
# Design considerations

- Large and deeply nested data model
- Iterative rostering of entities
  - persons
  - families
  - events
- Collecting detail about rostered entities
- Maintaining relationships across and between entities

# Needed in extension

- Blaise metadata and rules
- Variable length rosters
- Navigating hierarchical data structures
- SQL database
- Automated testing
- Fast performance

# Design



# Metadata and rules engine

- Specification development
- Program coding
- Testing
- Documentation

# Represent and navigate hierarchical structure

- Normal Blaise looping
- Instance navigator created
  - Interviewer directed
  - Status of each roster entry shown
  - Prevent re-entry into completed instances

Please select the question series for the Medical Events to be answered or reviewed next. To leave this question series, use Previous Page to go backwards, or Continue Interview to move forward.

### Question Series Navigation SELECT

- October 10 2011 John Doe Complete
- October 18 2011 John Doe Complete
- October 30 2011 John Doe In Progress

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Continue Interview

# Managing instances

- Maintain completion status
  - Write instance to SQL data base
  - Assess all instances against the rules engine for completion
- Backward and forward navigation through instances
- Deleting instances



# Multi-tiered architecture

- Business rules – Blaise engine
- SQL server data access layer
- Presentation layer
  - dynamically created
  - IIS on CAPI laptop
  - performs local field syntax, range checks, and routing on page
  - different screen types

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Report Bug Comments

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JOHN DOE GENERAL HOSPITAL HS Oct 09 2011

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**How much of the \$600.00 did anyone in the family pay for John Doe's visit to General Hospital on October 9, 2011. Please include all amounts paid.**

IF AMOUNT PAID IS NOTHING, DK, OR RF, SELECT **DOLLARS**, THEN RESPONSE.

IS ANSWER IN DOLLARS OR PERCENT?

DOLLARS

PERCENT

ENTER DOLLARS: \$

SELECT HELP FOR INFORMATION ON AMOUNTS TO INCLUDE.

# Grid screens

- Blaise tables
- Movement in any direction
- Update selected fields

**TOTAL CHARGE: \$ 600**

IF REPORTED IN **DOLLARS**: What was the amount Person/Family paid?

ENTER AMOUNT PAID TO COLUMN 2 OR COLUMN 3.

#	1. Sources of Payment	Payment	
		2. Amount \$ Paid	3. Amount % Paid
1	Person/Family	\$ 40.00	7 %
2	Blue Cross	\$ 0.00	0 %
3	Supplemental Policy	\$ 0.00	0 %
	Unpaid Balance \$	560	

TO ADD MORE SOURCES OF PAYMENT, SELECT [PREVIOUS PAGE](#).

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# Other Features

- Version control
- External database search
- CARI
- Automated testing
- Fine tune performance
- Utilities

# Integrated development

- Normal development process
- Normal version control
- Integration of automated testing

# Lessons learned

- Value of Blaise rules engine
- API functions well
- DEP behavior makes a difference
- Regression testing critical