



Blaise Team Presents

Blaise Team

Statistics Netherlands

Annapolis, September 27, 2007



Agenda

- Blaise 4.8
 - Highlights
- Blaise 4.81
 - Generic Data Storage
 - Internet Performance
- Blaise NG
 - White Paper
 - Technical Working Group



Build 1190, dated June 29, 2007



Blaise 4.8 Highlights

- **Architecture**
- Basic System
- Internet
- Basil



Architecture

- Blaise 4.8 uses client-server model to achieve efficient concurrent database access
- Centralised data access and CATI functionality through services: Database service and CATI service
- Blaise clients exchange XML messages over TCP/IP with services
- Applications developed in previous versions do not require any changes
- Rule of thumb: only access shared Blaise data files by using Blaise (4.8) tools



Architecture (2)

- When using the services it is not advised to mix the use of Blaise 4.7 or earlier with Blaise 4.8
- Installation redesigned: check on prerequisites and developer/server installations
- Blaise 4.8 can run side by side with 4.7
- Nearly all components got new names: BLAPI4A2.dll has become BLAPI3A.dll
- For ease of use in .NET we ship interop assemblies with components: StatNeth.Blaise.Interop.BLAPI3A.dll



Blaise 4.8 Highlights

- Architecture
- **Basic System**
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Basic System - Datamodel

- Alien Manipula call
 - ALIEN('calc.msu /P2007','tax')
- Multiple layout sections
 - Using the layout identifier of the modelib



Basic System - DEP

- New text control
 - Images, hints, hyperlinks
- Extensions to the menu
 - Expressions, labels
- Audit trail extensions
 - Backup record



Basic System - Manipula

- XML support
 - XSD generator, Import and Export
- Generic setups
 - Meta as run-time parameter
- Meta access
 - Static and dynamic meta available
- Integration of Manipula in DEP
 - INTERCHANGE=SHARED



Basic System - CATI

- Specification program
 - Events, logging, scheduler parameters
- Management program
 - Overview of all appointments



Basic System - Control Centre

- Improved parameters dialog
- Launcher
- 'Build All' command



Basic System - Emulator

- Can run in CATI and non-CATI mode
- Can generate random data
- Can run for a fixed time



Basic System - Delta

- Rewritten in .NET 2.0
- First version of rules graph has been added
- Graph view, tree view plus detail view are synchronized all the time
- [Demo](#)

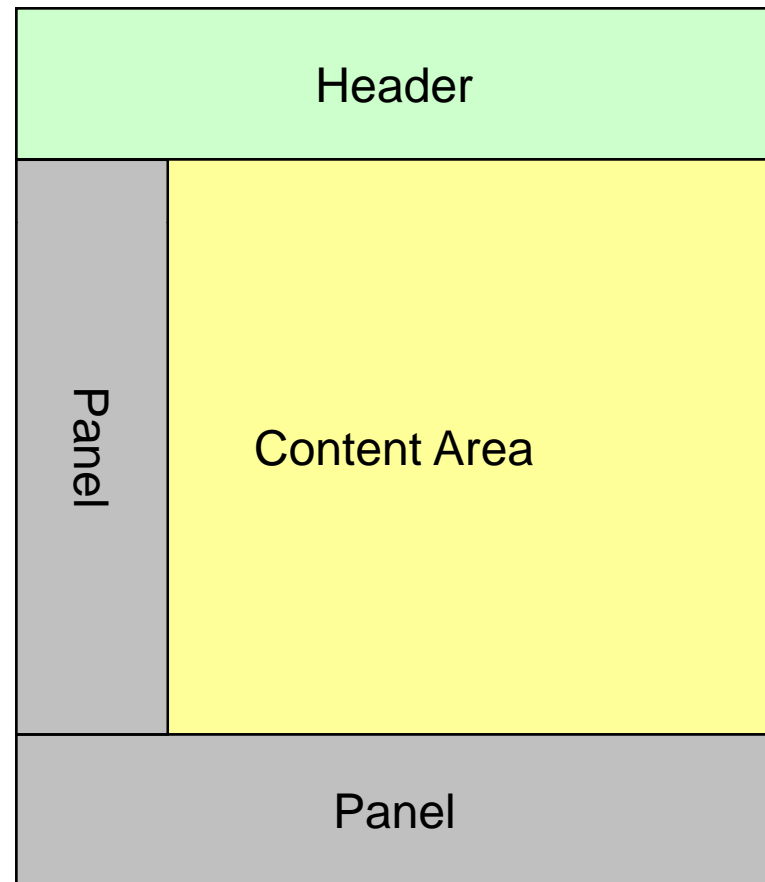


Blaise 4.8 Highlights

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Internet - Page Layout

- Header: Stylesheet
- Panels: Menu File
- Content Area:
 - ModeLib:
 - Font, Colors, Height
 - Datamodel:
 - Layout Section, Text
 - Interview Specification:
 - Grouping





Internet - Question Layout

- Determined by ModeLib (FieldPane)
- Increased influence on internet layout:
 - Relative positions of elements
 - New FieldPane elements (internet only):
 - ErrorText, HelpImage, HelpText, RemarkText, TagImage
 - Must be defined explicitly!
 - Prepare datamodel with 4.8 Internet ModeLib
 - Blaise 4.7 Interviews must be updated!



Internet - Group Layout

- Create custom layout for grouped questions
- Blaise 4.7: define in stylesheet
- Blaise 4.8: define in interview specification
- Increased flexibility, control over every element in the group
- Demo: [NSSE](#)



Internet - Blaise Menu

- Specifies panels on Interview Page:
- Panel:
 - Contains Controls
 - Position: Top, Left, Right, Bottom (floating)
- Control:
 - Type: Label, Button
 - Multilingual caption
 - Multiple actions



Internet - Menu Expressions

- Variable Control properties:
 - Visibility, Caption, Dimensions
- Determined by Menu Expression:
 - Subset of Blaise Operators: +, =, ,
 - Interview State: e.g. Page Index
 - Properties of Blaise Fields
- Examples:
 - $\$STOREDPAGEINDEX > 2$
 - $20 * Person.Age$



Internet - Work Database

- Requires primary key
- Saves incomplete record:
 - At interruption of interview
 - Manual save action
- Continuation of interrupted session:
 - Primary key is known: inspect Databases
 - Respondent can choose
- Complete interview: record is removed

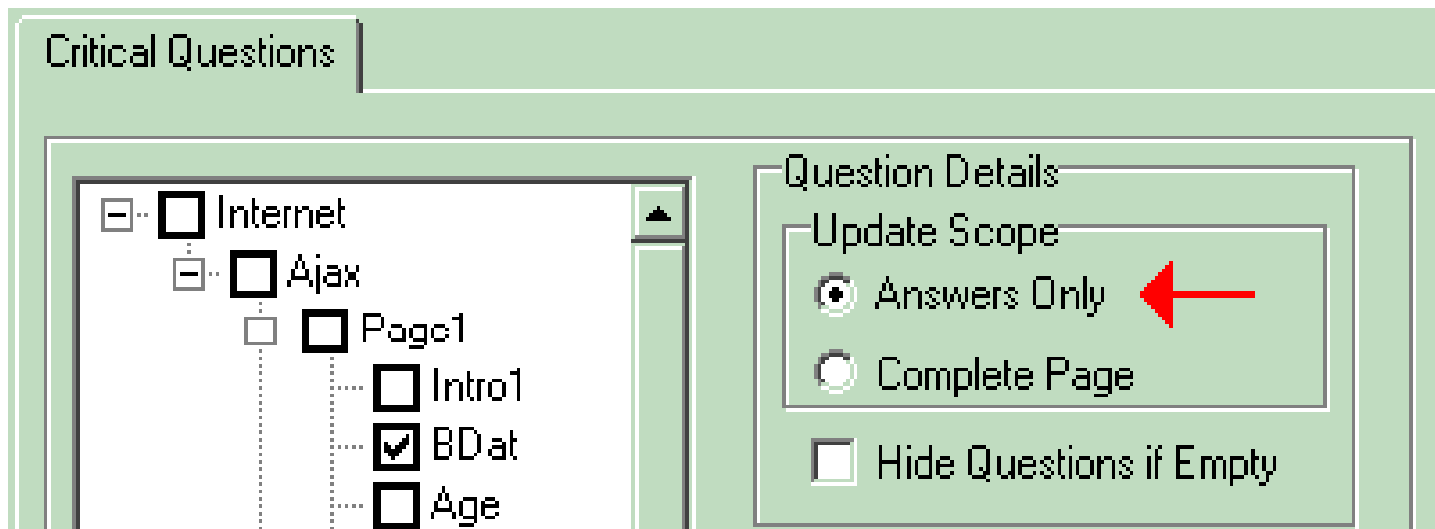


Internet - Journal

- Next best thing to Audit Trail
- Extendable
 - Datamodel driven

Internet - AJAX in Blaise

- Only exchange small amounts of data
- Critical Questions: Update Scope to 'Answers Only'



Internet - PDA

- Use 'simple' stylesheet
- One question per page (small grid in modelib)





Internet - Scalability

Blaise 4.8

- Interview installs / runs on multiple servers
- Data can be stored on separate server
- Performance can be increased by adding servers
- Maximum number of concurrent users depends on number of servers



Internet - Server Roles

- Internet server can have multiple roles
 - Web server
 - Processes requests from respondent
 - Sends new HTML page to respondent
 - Rules server
 - Executes Blaise rules
 - Data server
 - Provides data storage
- Choose server roles at Blaise installation



Blaise 4.8 Highlights

- Architecture
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What is Basil

- Alternative for Data Entry Program
- Specifically used for CASI
- Combines Blaise & Maniplus



Basil

- Advantages
 - Control over layout
 - Control over behavior
 - Easy deployment of instruments
- Disadvantages
 - No graphical design
 - Everything has to be programmed



Basil - Example

- Retail



Blaise 4.81



Blaise 4.81

- DEP. Free navigation in a table
 - Vertical navigation
- Control Centre
 - Data tree view
- CATI
 - More events, case start/end date
 - Support for 'sub priority'
 - Extended access to daybatch in Maniplus



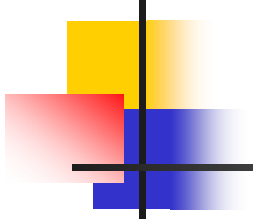
Blaise 4.81

- Internet Performance
 - Stress testing was a problem
 - Starting and ending an interview was expensive
 - Memory usage has been decreased
 - Stylesheet Processor Pooling



Blaise 4.81

- Input Data Store
- OLE DB Data Center



Blaise NG



Project Scope

- SWOT analysis
- User wishes
- Experience



SWOT analysis

- Strengths

- Easy to use for methodologists
- Can handle complex data models
- Multi-mode
- Modular design
- Central metadata concept
- Can work stand-alone
- Can be integrated into existing business processes



SWOT Analysis

- Weaknesses

- Layout concepts are difficult to understand
- Blaise language needs to be upgraded
- Blaise does not have a case management system
- Version control
- Security model



SWOT Analysis

- Opportunities
 - Chance to redesign
 - .NET
 - Wish list issues



SWOT Analysis

- Threats
 - Commitment from Statistics Netherlands
 - Timeframe



User Wishes

- Platform
- Meta
- Data
- Layout
- Case Management System
- Mixed Mode Capabilities
- Development Environment
- API
- Documentation



Experience

- Development environment
- Data Entry
- API
- Mixed Mode



Platform

- Development platform
 - The platform that the Blaise developers use
- Design platform
 - The operating systems where the Blaise development system will run upon
- Runtime platform
 - The operating system where Blaise instruments run upon



Research Areas

- Meta
- Data
- Layout
- Development Environment
- Compiler
- Runtime Environment
- Case Management



Meta

- Central Metadata Concept
 - Core meta
 - Independent of source
 - Instrument meta
 - Extra metadata to define an instrument for a specific mode of data collection
 - Process meta
 - Multi-mode settings, case management settings, etc.
 - Para meta
 - Describes paradata, like audit trail information



Data

- Closely related to meta
- Blaise should be able to handle large data models
- Use of industry standard databases
- Cross-survey data storage
- Relational model vs. hierarchical model
- Trigrams
- Proprietary or not



Layout

- Specification language
- Automatic generation of layout
- Screen resolutions
- Different platforms
- Supported controls, user defined controls



Development Environment

- Inventory of features
- Make-or-buy
- Integration with compiler
- Debugging facilities



Compiler

- Definition of the Blaise NG Language
- Compiler features
- Make-or-buy
- Integration into IDE
- Maintainability



Runtime Environment

- As many environments as possible
- Inventory of possible platforms, operating systems and browser environments
- Platform-independent vs. platform specific solutions
- Standards



Case Management

- Support for multi-mode surveys
- Inventory of features
- Security issues (firewalls, etc)
- Specification of case management information



Technical Working Group



Technical Working Group

- Members from major Blaise customers
- Assignment: Technical direction for Blaise NG
- Result: Report, presented to the BCLUB on Tuesday



User Wishes (1)

- Multi Platform system
- XML throughout the system
- RDBMS support
- Layout requirements
- Mixed Mode emphasis
 - Case Management System
- Development Environment



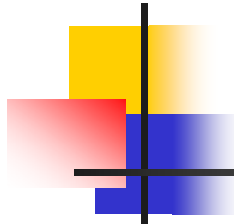
User Wishes (2)

- Language Enhancements
 - Indefinite arrays
- Interoperability
 - SOA
- Documentation
 - Integration of Delta and MQDS
- Compatibility
- Performance
- Security



Directions

- User-Defined meta information
 - Roles, attributes
- Run-time platform investigation
 - Silverlight
 - XForms
- Consistent way to specify layout
 - XAML
 - Combination of current layout specification languages



Path

- Meta definition
- Checking mechanism
- Data storage definition
- Runtime Environment
- Layout definition
- Language definition + Compiler
- Development Environment