Blaise NG Testing

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Software Situation

Blaise 4.8 (current)

Blaise 5 (future)

"We're trying to get from one very good system to another very good system. There are many similarities and many differences."

Geographic Situation

"We live all over the place. This is good, but it presents challenges."

People Situation

"On the left we have members of the Blaise team, and on the right we have Blaise users. This can come across as 'them' versus 'us'. "

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People Situation

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"But we're all in this together and we're working for the same thing."

Testing Challenges and Strengths

Challenges

- Blaise system is vast
- Blaise team is small
- Redesigned modules
- All code is reprogrammed
- New platforms targeted
- Users are demanding
- Users want it inexpensively
- Staged conversion
- Testing budget is small

Strengths

- Large installed base
- Users needs are known
- **13 BCLUB members are 'NG Testers'**
- MMPSS is testing coordinator
- Incredible test suite
- Systematic approach
- Communication channels
- Blaise NG White Paper

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Blaise NG Testers

Institute

- Australian Central Bureau of Statistics
- China – Beijing University
- Statistics Canada
- Statistics Germany
- Statistics Netherlands production unit
- Statistics New Zealand
- Statistics Norway
- UK – Office for National Statistics
- UK – National Centre for Social Research
- US – Census Bureau
- US – National Agricultural Statistics Service
- US – University of Michigan
- US – Westat
- US – MMP Survey Services, LLC

Tasks

- Interface examples
- Test suite contributions
- Testing versions of Blaise 5
- Statement of impressions
- Evaluation of fitness

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Aspects of Testing

Blaise 5 can handle current survey programs

- Interfaces
- Blaise test suite
- Individual testing
- Automated testing
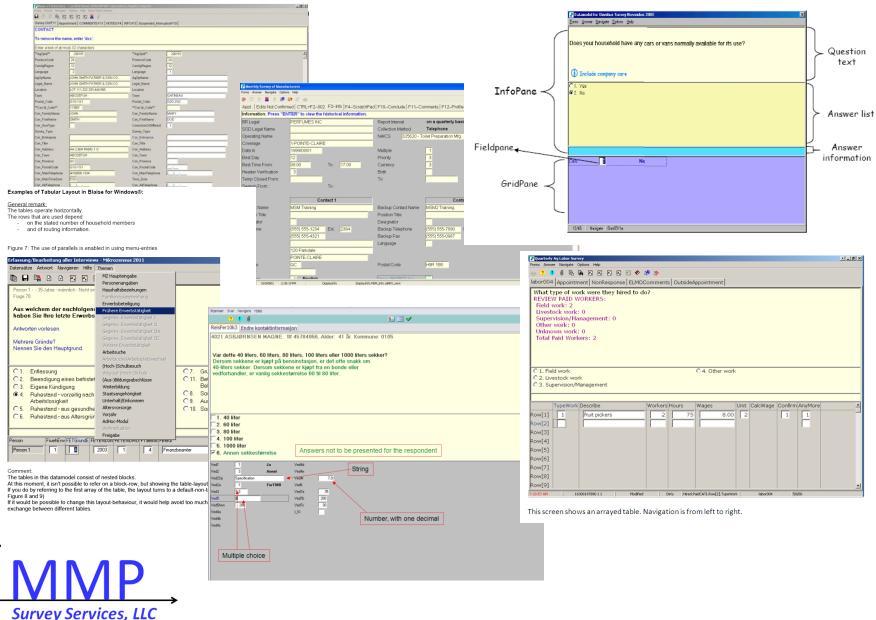
Blaise 5 implements new functionality

- .NET world
- Blaise NG White Paper (2007)
- Accessibility

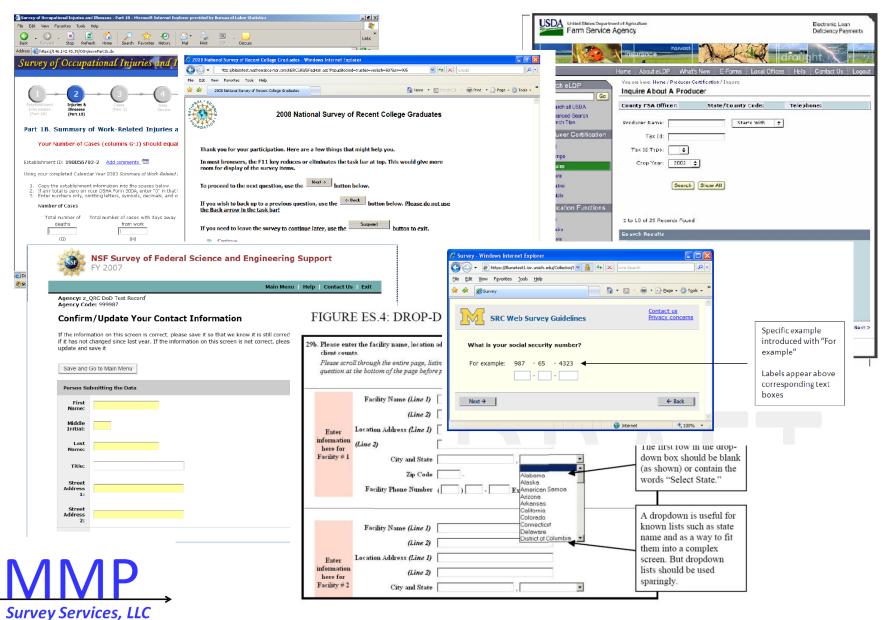**Blaise 5 is suitable, usable, and efficient**

- Impressions of testers
- Feedback from MMPSS

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Blaise 4 Windows Interfaces

Web Survey Interface Research

Test Suite

Composition

- 34 studies in Blaise 4.8
- They range from small to extremely large
- 4,000 to 5,000 source code files => Blaise 4-to-5 conversion in batch ~ 10 minutes
- Incredibly diverse
    - Subject matter
    - Datamodel structure
- CATI, CAPI, CADI, WEB, and POST-PROCESSING modes, including multimode
- Some come with Maniplus / Manipula / survey processing infrastructures

MMPSS

- Prepared and tested each instrument
- Provided a summary of the instrument or group of instruments
- Securely archived them for the Blaise Team
- Inspected them for unique, and software-stretching structures and displays
- Assessed the instruments for applicability to new Blaise NG features
- May incorporate them into automated testing

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Some of the Test Suite

Instrument path and name	Unique fields	Elemen-tary fields	Total fields	Block Fields	Ratio total to unique
\US_Census\Surveys\CQR\e-inst\inst.tcd	4216	3986	223436	230	53.00
\US_Census\Surveys\SONC\e-inst\inst.tcd	515	488	124618	27	241.98
\UK_ONS\Surveys\HAS1001a\HAS1001a.tcd	2557	2266	52276	291	20.44
\UK_NatCen\Surveys\usoc\usoc.tcd	1142	1058	43576	84	38.16
\US_Census\Surveys\NCVS\e-inst\Inst.tcd	2243	2145	33630	98	14.99
\US_Michigan\Surveys\Psid09\Psid09.tcd	2933	2790	32410	143	11.05
\Australia\Surveys\BlaiseNGTest\BlaiseNGTest.tcd	473	413	30400	60	64.27
\US_Michigan\Surveys\HRS\Source\HRS10.tcd	7047	6644	28496	403	4.04
\Germany\Surveys\MikrozensusSurvey\source\Erhe	402	321	25591	81	63.66
\NewZealand\Surveys\DPS_Cordinated_Testing\Tim	166	152	15425	14	92.92
\UK_ONS\Surveys\HAS1001a\Externals\hak0909x.t	585	548	11800	37	20.17
\Canada\Surveys\GSS24\SURVEY\GSS24.tcd	873	736	8815	137	10.10

Test Suite

Uses

- Bring up each datamodel, one at a time in the Blaise NG Control Centre
- To parse in batch
- As a source of source code and datamodel structures
- To test field-to-field performance
- To test layout features
- To test new Blaise NG features including Blaise language features
- To test the selective checking mechanism
- To test file-size and performance issues across records of a Blaise dataset
- To test out the new Blaise relational database
- As a source for regression testing / automated testing methods
- To test Manipula / Maniplus modules
- To automatically enter test cases after each build.

Examples of Use So Far

- The whole test suite has been converted to Blaise 5 source code files in batch
- The Blaise 5 parser has been tested on several datamodels
    - This will also be done in batch to evaluate the parser on the whole test suite.

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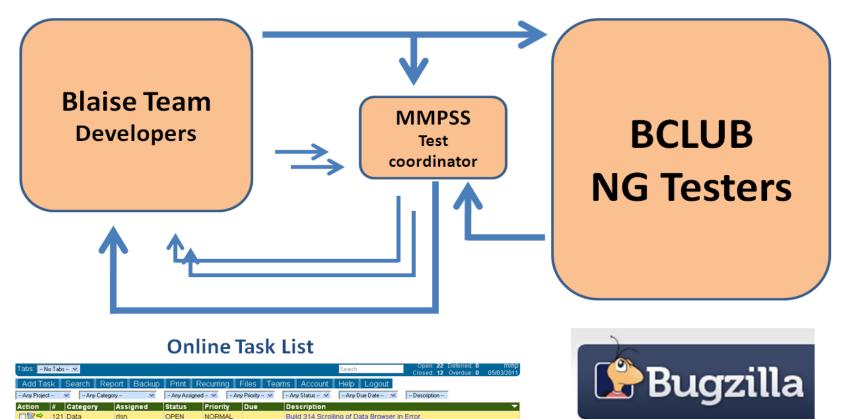
Individual Testing

Various People Trying It Out

- Blaise 5 developers
- MMPSS
- Blaise NG Testers (13 institutes)

- Test datamodels
- Existing datamodels

- New Control Centre
- New interfaces
- Blaise 4 to 5 conversion
- Many other modules

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Testing Plan: 3 Groups
Minor and Major Build Cycles

Blaise Team
Developers

MMPSS
Test
coordinator

BCLUB
NG Testers

Online Task List

| Tabs: | -- No Tabs -- ∨ | | | | | Search | | | Open: **22** Deferred: **0** | mmp |
| Closed: **12** Overdue: **0** | 05/03/2011 |

| Add Task | Search | Report | Backup | Print | Recurring | Files | Teams | Account | Help | Logout |

| -- Any Project -- ∨ | -- Any Category -- ∨ | -- Any Assigned -- ∨ | -- Any Priority -- ∨ | -- Any Status -- ∨ | -- Any Due Date -- ∨ | -- Description -- |

Action	#	Category	Assigned	Status	Priority	Due	Description
☐📝➡	121	Data	rlsn	OPEN	NORMAL		Build 314 Scrolling of Data Browser in Error

http://www.onlinetasklist.com/otl/listTasks

Bugzilla

http://www.bugzilla.org/

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Testing Cycles

Just Started

- First test release January 10, 2011
- Second test release, end of February 2011

- Major releases are every 6 weeks
- Minor releases are every 2 weeks

- We have had about 60 bug reports from 5 or 6 users
- We have had a first batch of impressions

- The Blaise NG Testers also ask a lot of questions
- Some glitches, for example, install issues

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3 Groups

Blaise Team

- Set goals for each build
- Develop
- First – level testing
- Communicate goals
- Receive bug reports
- Fix bugs
- First – level retesting
- Release builds
- Support MMPSS
- Use test suite as needed
- Adopt automated testing
- Documents Blaise NG

MMPSS

- Finds and reports bugs
- Keeps big and many bugs away from the NG Testers
- Provides quick feedback
- Provides frequent feedback
- Gives opinions
- Checks Blaise NG against the Blaise NG White Paper
- Coordinates NG Testers
- Organizes the test suite
- Researches issues such as accessibility
- Summarizes information for the Blaise team
- Documents Blaise NG
- Maintains test plan
- Sets up automated testing
- Can help with requirements and specification

NG Testers

- Provide test suite
- Provide web screen needs
- Provide DEP screen displays
- Provide Modelib
- Provide resources
- Test major builds
- Communicate bugs and issues to MMPSS
- Evaluate Blaise NG against their needs
- Implement automated testing methods on their instruments
- Give feedback on documentation
- Can start to plan Blaise NG implementation

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Automated Testing

Exploring This Possibility

- With the large test suite, automated methods can play a big role
- The use of automated methods is in the assessment stages
- Assessing vendors
  - TestPartner – Westat uses this and Westat is only 2 kilometers from my house
- Don't want to over-analyze this, we need basic to mid-level capability
- Ability to coordinate 14 organizational groups

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Blaise 5 New Functionality

Blaise Next Generation

A White Paper by the

BCLUB Technical Working Group on Blaise NG

September 25, 2007

- Paper reviews 26 Blaise 4.8 modules

- Gives priorities

- Enumerates new functionality and details about implementation

- One testing task is to assess the development of Blaise 5 against the White Paper

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Blaise 5 New Features

- Unicode, can handle any language
- New database
- New platforms
- Language features
- Extended layout capabilities
- And so on and so forth

Topic
Scope
Platform
Metadata
Data
Layout
Case Management System
Mixed Mode
Development Environment
Language Enhancements
Integration and Interoperability
Documentation
Migration
Performance
Security

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Accessibility

Blaise NG Must Be Accessible

• Almost all countries that use Blaise have accessibility standards

•There are a growing number of people who have a disability

- • Visual, motor, hearing, seizure, and cognitive
- • Blaise 5 should be available and accessible to all

Guidelines / Standards

• WCAG 2.0 = guidelines

• Section 508 in U.S. (and adopted by a few other countries) = regulations

• There is a crosswalk between the two approaches

Research and Accessibility Test Benchmark

• SN / MMPSS / Westat and others have done a lot of research

• Test benchmark is in the process of being created by MMPSS

- • Consists of many example screens and how best they should be done
- • Corresponding web screens are being programmed
- • Ongoing effort

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Summary

Blaise 5 Testing is Underway

The Test Suite is Awesome and Has Many Uses

We Are Still Learning How Best to Implement Testing

We Are Just Getting Started

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