VA Smalltalk Update

John O’Keefe
Principal Smalltalk Architect
Instantiations, Inc.
But first, the rebirth of Instantiations

- Instantiations roots are in Smalltalk development tools
- The company licensed Smalltalk technology and grew
- The Smalltalk tools were very good, so the company redid them for Java and grew
  - and redid them again for Eclipse and grew
- Google liked the Java tools, so they bought that part of Instantiations
  - and Instantiations took the money and went back to its roots
- **VA Smalltalk...Onward and Upward!**
VA Smalltalk™

Onward and upward

About Us

Yes, it's true. Instantiations Java development products and people have a new home at Google, but VA Smalltalk™ is staying put - with the same people, same products, and same dedication to our customers and to Smalltalk.

Smalltalk is alive and well at Instantiations, as is our commitment to maintaining VA Smalltalk as a strong, modern, high ROI development environment. The new instantiations is 100% focused on developing powerful and innovative commercial Smalltalk products, and to expanding its long-standing support for the Smalltalk community.

We appreciate your support and look forward to working with you toward a bright Smalltalk future.

Awards

SD Times Top Innovator for 3 years

Business Journal Fastest Growing Private 100

Quicklinks

Products
- Products Overview
- Download VA Smalltalk
- Download VA Smalltalk Add-Ons

Support
- Contact Support
- Forums
- FAQs

Resources
- Forums
- Datasheets
- Presentations

Corporate
- Overview
- Events
- News

Copyright, Instantiations, Inc.
VA Smalltalk V8.0.2
May 2010

- Seaside 3.0 update
- GLORP initial release
- Platform currency and enhancements
- Database currency and enhancements
- Class library enhancements
- SUnit 4.0 release
- Documentation updates
Seaside 3.0

- Seaside is an open source framework for developing sophisticated web applications
  - Layered abstraction over HTTP and HTML
    - HTML concepts exposed in Smalltalk
    - HTML markup hidden
  - Base for higher-function frameworks
  - Quickly build highly interactive applications
- Scriptaculous and jQuery frameworks
  - JavaScript Ajax libraries
  - Programmed through Smalltalk artifacts
### Bereken uw premie

#### Uw auto
- Weet u het kenteken van de auto? (ja/nie)  
- Kanteken  
- Aantal kilometers per jaar

#### Bent u de hoofdBewijsrunder? (ja/nee)

#### Uw gegevens
- Geboortedatum  
- Postcode  
- Schadevrij jaren

#### Uw verzekering
- Ingangsdatum: 03-09-2009
Seaside Cautions

• Seaside Flow (currently) unsupported by VA Smalltalk
  ▪ No #wait: because no continuations
    • <some code>.
      r := self call: aComponent. “NO, does self wait:”
      <more code using r>.
    • <some code>.
      self show: aComponent onAnswer: [ :r |
      <more code using r |]. “YES”
GLORP Initial Release
0.3.178+

• Generic Lightweight Object-Relational Persistence
  ▪ Open Source framework for Object/Relational database access
  ▪ With concepts reminiscent of popular TOPLink product
  ▪ Provides:
    • Mapping of objects into relational databases
    • Transactions for change grouping
    • Non-intrusive implementation
    • Support for queries based on objects and data
    • High performance through optimized database access
  ▪ Documented in Database Guide
Platform Currency and Enhancements

• Support added for:
  ▪ Ubuntu 9.04 (32- and 64-bit)
  ▪ Windows Server 2008 R2 (64-bit)

• Windows executables are digitally signed
  ▪ Enhanced security
  ▪ Windows Logo Certification requirements
Platform Currency and Enhancements (cont.)

- Windows power management events supported
  - GUI apps can react to Sleep/Hibernate and Resume
  - New protocol on Subapplication class
    - #suspending
    - #resume
  - Useful for resetting sockets, reconnecting development manager, etc.
  - Documented in *Smalltalk User's Guide*
Database Currency and Enhancements

- Support added for Oracle 11g
  - Compatibility mode
  - No code changes
- Support added for Oracle function calls
  - Eliminates need to wrap function calls in stored procedures
  - Examples of usage shown in Database Guide
Database Currency and Enhancements (cont.)

• Support added for Anonymous SQL blocks
  ▪ Provides ability to send user-defined data types
  ▪ Provides ability to retrieve user-defined data types
  ▪ Supported in Oracle
  ▪ Examples of usage shown in Database Guide
Class Library Enhancements

• Method pragmas
  ▪ Allow you to annotate methods with user-defined processing information
  ▪ Stored as literals in instances of CompiledMethod
  ▪ Pragma class has protocol for finding and processing annotations
  ▪ Provided for Pier Content Management System
  ▪ Documented in Programmer’s Reference
Instance- and class-based exceptions are now polymorphic

- Providing clearer and more efficient handling of errors
- Brings back function dropped in VAST 6.0.1

Example:

```
^ [ (Array new: 3) at: 4 ]
on: Error do: [ :ex |
  Transcript cr; show: ex
  messageText. ex return ]
```

*Primitive failed in: Object>>#at: due to Index out of range in argument 1*
SUnit 4.0
Just in Time Resources

• Resources made available just-in-time:
  ▪ First test that needs it prompts setup
  ▪ Later tests that need it can see whether it has been (or failed to be) setup
  ▪ Tear down guaranteed at end of run; can be done anytime

• Resource-processing is ordered
  ▪ A test’s resources are setup in order and torn down in reverse order
  ▪ A resource’s resources are setup before it is setup and torn down after it is torn down
SUnit 4.0
Class Changes

• First there were three classes ...  
  testCase, testSuite and testResult

• And then there was a fourth ...  
  testResource to manage resources

• And now a fifth ...  
  testasserter - abstract superclass of  
  testCase 
  testResource  
  any user-created testCase delegate class

• Resources understand #assert:... protocol 
  • #setUp and #isAvailable run inside the handler
SUnit 4.0
Class Changes (cont.)

• Logging
  ▪ `TestCase` methods moved to the class-side
  ▪ `#isLogging`, and `#failureLog` (and
    `#logFailure`: is now on both sides)
Documentation Updates

- **Web Services Guide**
  - Added *Getting Started: Web Services in a Day*
  - Added *Cookbook* with debugging hints, XML deserialization tips, and guidance on securing a Web service

- **Smalltalk User’s Guide**
  - Added *Application behavior when Windows Power Management events occur*
  - Moved Namespace support to the Programmer’s Reference

- **Programmer’s Reference**
  - Added *Pragmas*, *Namespace pragmas*, and *Annotation pragmas*

- **Database Guide**
  - Added *GLORP Tutorial*, *Anonymous PL/SQL Blocks*, and *Function Calls using Native Oracle*
Looking to the Future
Future Releases

• Release schedule is twice a year
  ▪ Usually May and November
• Next release is November 2010
  ▪ Web interface
    • Seaside 3.0
  ▪ Development Tools
    • Message extraction tool
• Platform
  • Ubuntu 10.04
  • Fedora Core 13
Priority Technologies

- Internationalization
- Web interface
- Database
- GUI Look and Feel
- Development Tools
- Security
- Performance and Scalability
- Platforms
- Other
Future Releases Candidates

• Internationalization
  ▪ Unicode/UTF-8

• Web interface
  ▪ Seaside 3.1
  ▪ SST Servlet multipart forms
  ▪ Web services tooling improvements
  ▪ Web services debugging tools/doc
  ▪ Validating XML parser
Future Releases Candidates (cont.)

• GUI Look and Feel
  ▪ GTK+ 2.x on Linux
  ▪ Additional Windows Common Controls
  ▪ Additional icon/image support

• Development Tools
  ▪ New ‘Settings’ framework and dialogs
  ▪ Improved Changes Browser

• Database
  ▪ GLORP infrastructure improvements
  ▪ GLORP Programmer’s Reference
  ▪ Active Records built on GLORP
Future Releases Candidates (cont.)

• Security
  ▪ “Basic” security framework -- current OpenSSL
  ▪ “Full” security framework -- OpenSSL 1.0

• Performance and Scalability
  ▪ Incremental garbage collection
  ▪ 64-bit Smalltalk
  ▪ Class library performance hotspots

• Platform
  ▪ Windows Services control moved to Smalltalk
Future Releases Candidates (cont.)

• Installation
  ▪ Single installer for Client and Manager
  ▪ Install/Repair/Uninstall
  ▪ Seamless with User Account Control (UAC)

• Class Libraries
  ▪ Collection hashing policies
  ▪ Collection sorting policies
How Do I Get VA Smalltalk?

• Download evaluation copy
• Buy development licenses
How Do I Get VA Smalltalk?

- Download evaluation copy
- Buy development licenses
- Download development build
Development Builds

• An experiment in
  ▪ Early delivery
  ▪ Continuous integration
  ▪ 1 for V8.0.1, 2 for V8.0.2, 2 for V8.0.3

• Availability
  ▪ Announced on VA Smalltalk Forum and comp.lang.smalltalk
  ▪ Download from VA Smalltalk website
  ▪ Irregular schedule
  ▪ Documentation updated to match build
  ▪ Windows and Linux only

• Fix-list for build on VA Smalltalk forum
How Do I Get VA Smalltalk?

- Download evaluation copy
- Buy development licenses
- Download development build
- Be a committer on an Open Source project
Open Source Project Committer

• Instantiations will donate a perpetual VA Smalltalk license
  ▪ to committers
  ▪ working on non-commercial open source project
  ▪ Hint: release something to VAStGoodies.com

• No charge

• Details: Instantiations' Donations to Open Source Projects page
How Do I Get VA Smalltalk?

- Download evaluation copy
- Buy development licenses
- Download development build
- Be a committer on an Open Source project
- Be an educational institution
Academic Licenses

- Accredited educational institutions
  - Teaching staff
  - Students
- No charge
- Details: Academic License Program page
Backup
GLORP Basics

• Create a session object
  ▪ Made from an accessor object
  ▪ Which is made from a connection object
  ▪ Which is made from a login object
• Within a unit of work, make changes
• Use session to query existing data
• Create new objects and add them
  ▪ Sub-objects are automatically noted
• Commit or rollback the unit of work
GLORP Mapping

• Simple mapping is one-to-one
  ▪ Describe a table
  ▪ Create an object that looks like a row
  ▪ Describe that object and its mapping

• Complex mappings
  ▪ One row becomes variant object type
  ▪ Multiple rows combine for one value

• Can map existing objects to RDB
GLORP Descriptor

- What a table contains
- What objects will participate
- How to map them
- Very flexible system
- When in doubt, refer to the unit tests for examples
VA Smalltalk V8.0.1

- Seaside 3.0 alpha5
- Continued Web Services enhancements
- Additional enhancements for tabbed browsers
- Windows 7 (32-/64-bit)
- “cdecl” calling convention on Windows
- Improved error diagnostics for memory allocation
- Enhanced SST resource management for faster execution using less memory
VA Smalltalk V8.0

• Seaside 2.9 alpha3 Core, jQuery, Scriptaculous, RSS, porting layer and development tools
• Enhanced Web Services supporting “Document Literal/Document Literal Wrapped” style
• Enhanced IDE with tabbed browsers, native Windows widgets, inspector improvements, a new Method List Pane, Text Pane, Version Graph Tab, more
• New documentation delivery system (web or local) with improved navigation, formatting and updated content