VA Smalltalk Update

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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 more
• 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!**
Recent Events

• Growth in Engineering staff
  ▪ Currently +1
  ▪ Looking for more

• University out-reach
  ▪ Hasso Plattner Institute Bachelor Project

• User out-reach
  ▪ Conference participation
  ▪ VA Smalltalk Forum -> VA Smalltalk Google Group
    • Will be aggregated on http://forum.world.st
VA Smalltalk V8.0  
May 2009

- Seaside 2.9 alpha3 Core, jQuery, Scriptaculous, RSS, porting layer and development tools
- 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
subApplications

"Return the sub-applications which are a direct part of the receiver."

^subApplications
subApplications

"Return the sub-applications which are a direct part of the receiver."

^subApplications^
SciComWIN V 7.0.1 [77]a

R4.0 002  R4.0 003 [Fix for 1FE4GQK]

V 6.0.0 [43] + 14886  V 6.0.0 [43] + 14886 a  V 6.0.0 [43] + 14886 b  V 6.0.1 [46] a  V 7.0.1 [77]a

SciComWIN V 7.0.1 [77]a (Defined) In SciComWIN
ByteArray>>#byteAt:put:

"Store the Object argument value in the variable position of the receiver represented by the Integer argument index. Answer the Object argument value that was stored.

Fail if index is not a kind of Integer Fail if index is < 1 Fail if the receiver does not have indexed variables Fail if index is greater than the number of indexed variables in the receiver Fail if the class of value is not appropriate for the index variable type of the receiver."

<primitive: VMprObjectBasicAtPut>

self primitiveErrorCode = PrimErrReadOnly ifTrue: [
  ^self basicAt: index put: value

0000 00  temps  = 0
0001 02  args   = 2
0002 4A  prim   = 74  VMprObjectBasicAtPut
0003 00  stackFrame = 0
0004 87  BCsendUnary0 - (sp) send unary 0 (#print
0005 1F 20  BCpushAssocB - (b) push assoc 1 (' Prin
0007 06  BCsendEqual - (sp) send #=
0008 30 00 06 00  BCpopJumpFalseWP - (wp) pop, jum
0012 3F  BCpushSelf - push self
0013 80  BCpushTemp1 - (sp) push temp 1 (index
0014 7F  BCpushTemp0 - (sp) push temp 0 (value
0015 64 24  BCsendArgs2 - (sp) send literal 2 (#bas
0017 44  BCReturnTOS - return TOS
0018 3F  BCpushSelf - push self
Working with the Composition Editor

When creating or modifying a part, you open the Composition Editor for that part. The Composition Editor is made up of several components: the parts palette along the left side, the status area along the bottom left, the tool bar along the top, the free-form surface where you layout the part and subparts, and the visual tool symbols at the bottom right corner.
Introduction

Using the VA Smalltalk Documentation
Browse topics in the Contents frame on the right. Click on a topic in the Navigation frame on the left to have it displayed in the contents.

Use the Back and Forward buttons on the browser to navigate within the history of viewed topics. Use the Back (←) and Forward (→) buttons above the Contents frame to navigate topics immediately before and after the current topic.

Navigate up the current branch of the table of contents tree by clicking on the breadcrumbs at the top of each contents page.

Searching
To quickly locate topics on a particular subject in the documentation, enter a query in the Search tab. You can narrow the scope of your search by selecting the single book you are interested in.

When you perform a search, the results are displayed by topic title. Topics with a higher rank number are more likely to contain the information you need.

Synchronizing
After you run a search and find a topic you were looking for, click the Show in Contents button (+) to match the navigation tree with the current topic. You might also find it useful to synchronize after following in-topic links.

Favorites
Use the Favorites tab to bookmark topics you will want to find again quickly. You will set
Text Prompter properties

The Text Prompter part has the following properties:

answerString
The answerString property represents the string that the user last entered into the text field. The value of this property changes when the user presses the Enter key or selects OK in the prompter. If the user selects Cancel, the value of the answerString property does not change.

defaultAnswerString
The defaultAnswerString property represents the string of characters displayed in the text field each time the prompter is displayed.

messageString
The messageString property specifies the string of characters you want to use as the text of your message.

partName
The partName property specifies the name you want to use to describe the part. For nonvisual parts, this text appears under the icon for the part on the free-form surface.

The name of the part can consist of alphanumeric characters, and must be different from those of all other parts on the layout surface.

If you do not specify a part name, VA Smalltalk generates a unique name based on the class name of the part.

prompterStyle
The prompterStyle property specifies the type of dialog you want the prompter to
VA Smalltalk V8.0.1
November 2009

• 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 V8.0.2
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

• 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
Seaside Cautions

• Seaside Flow unsupported (currently)
  ▪ No #wait: because no continuations
    • <some code>.
      r := self call: aComponent. “NO, does self wait:”
      <more code using r>.

  ▪ Alternative coding style
    • <some code>.
      self show: aComponent onAnswer: [ :r |
      <more code using r ]. “YES”

  ▪ See discussion in http://book.seaside.st
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

• Oracle function calls
  ▪ Eliminates need to wrap function calls in stored procedures

• Anonymous SQL blocks
  ▪ Provides ability to send and retrieve user-defined data types

• 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
  - Originally provided for Pier Content Management System; used in PetitParser
  - Documented in Programmer’s Reference
Class Library Enhancements (cont.)

- 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:
    ```plaintext
    ^ [ (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
Documentation Updates

• **Web Services Guide**
  - Added *Getting Started: Web Services in a Day*
  - Added *Cookbook* with debugging hints, XML de-serialization 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 December 2010
  - Web interface
    - Seaside 3.0
  - Development Tools
    - Message extraction tool
- Platform
  - Ubuntu 10.10
  - 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
  ▪ Monticello importer

• 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 0.9.8o or 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
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Development Builds

• An experiment in
  ▪ Early delivery
  ▪ Continuous integration
  ▪ 1 for V8.0.1, 2 for V8.0.2, 1 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
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• Be an educational institution
Academic Licenses

• Accredited educational institutions
  ▪ Teaching staff
  ▪ Students
• No charge
• Details: Academic License Program page
Contact us

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