



# VASmalltalk 7.5 and Beyond

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 **instantiations**

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Slides available at:  
<http://www.instantiations.com/company/detail/smalltalk-events.html>



# Agenda

- Introduction
- VA Smalltalk 7.5 to 7.5.2
- Future Directions
- Stats
- Q&A





# Agenda



- **Introduction**
- VA Smalltalk 7.5 to 7.5.2
- Future Directions
- Stats
- Q&A

# Who am I?



- First saw (Digitalk) Smalltalk in 1987; first used Smalltalk in late '80s; full-time since 1990
- Joined original IBM Smalltalk prototype team in 1990
- Joined IBM VisualAge Smalltalk development team as a founding member in 1991
- Team Lead and Chief Architect of IBM VisualAge Smalltalk from 1997 to 2007
- Retired from IBM and joined Instantiations in February 2007 to lead VA Smalltalk development team

**VASmalltalk<sup>™</sup>7**

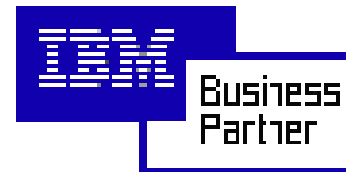
 **instantiations**  
Build Quality Software

**7.5 and Beyond**

# Introducing Instantiations



- Multi-faceted software company (re)founded in 1997
- Creates and markets leading edge development tools for enterprise software developers (VA Smalltalk, Rational, WebSphere, Eclipse)
- Strategic partnerships:
  - IBM Advanced Business Partner
  - Eclipse Foundation Member
- Established Fortune 1000 customer relationships
- Hundreds of Smalltalk customers worldwide

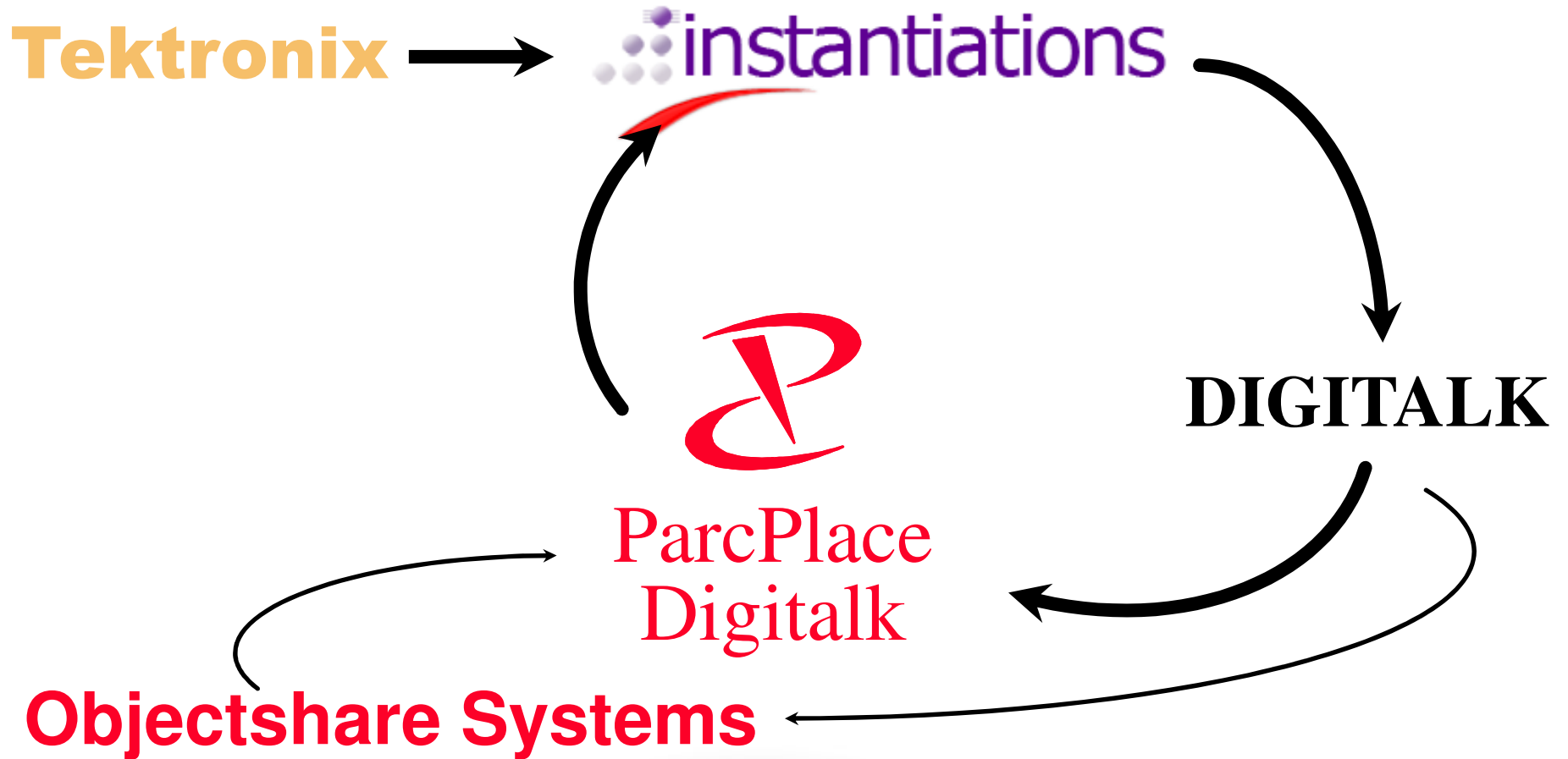


**VA Smalltalk 7**

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# Instantiations History



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# Agenda

- Introduction
- **VA Smalltalk 7.5 to 7.5.2**
- Future Directions
- Stats
- Q&A





# VA Smalltalk 7.5.2



- Windows Vista (32- and 64-bit) support
- SuSE, Red Hat, and Ubuntu Linux (32- and 64-bit) support
- Windows Large Address Support
- Native Oracle 10 support
- Windows Vista themes
- Web Services Demo
- Refactoring Browser and MED extensions
- SUnit and SUnit Browser
- ENVY/QA
- Browser Enhancements

New in 7.5.2

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# Windows Vista Support



- User Account Control (UAC)
- Windows Aero
- Help



# User Account Control - 1



- Users
  - Standard
  - Administrator (runs as standard user)
- Applications (aka Processes)
  - Mode
    - asInvoker (default)
    - highestAvailable
    - requireAdministrator
  - Controlled with manifest file or properties

# User Account Control - 2



- VA Smalltalk apps use manifests

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<assembly xmlns="urn:schemas-microsoft-com:asm.v1" manifestVersion="1.0">
  <assemblyIdentity version="7.5.0.0" processorArchitecture="X86"
    name="Instantiations.VASmalltalk.abt" type="win32" />
  <description>VA Smalltalk Development Executable</description>
  <trustInfo xmlns="urn:schemas-microsoft-com:asm.v3">
    <security>
      <requestedPrivileges>
        <requestedExecutionLevel level="asInvoker" uiAccess="false" />
      </requestedPrivileges>
    </security>
  </trustInfo>
</assembly>
```



## User Account Control - 3



- Most VA Smalltalk executables run “asInvoker”
- Some need “requireAdministrator”
  - emsrv.exe – installs itself as a service
  - abtntsir.exe – installs VA Smalltalk application as a service
  - setup.exe – write to protected directories and registry keys



# File / Registry Location - 1



## ■ Standard install location

- Per-machine files:  
%ProgramFiles%\Instantiations\VA Smalltalk\<>version>
  - Cannot modify files in this location
- \*Per-user files:  
%UserProfile%\<My>Documents\Instantiations\VA Smalltalk\<>version>
- \*Start menu shortcut's "Start in:" points to per-user directory
- \*Shared R/W files (manager):  
%AllUsersProfile%\Instantiations\VA Smalltalk\<>version>\manager

\* Will be done automatically in future release; must be done manually with V7.5

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## File / Registry Location - 2

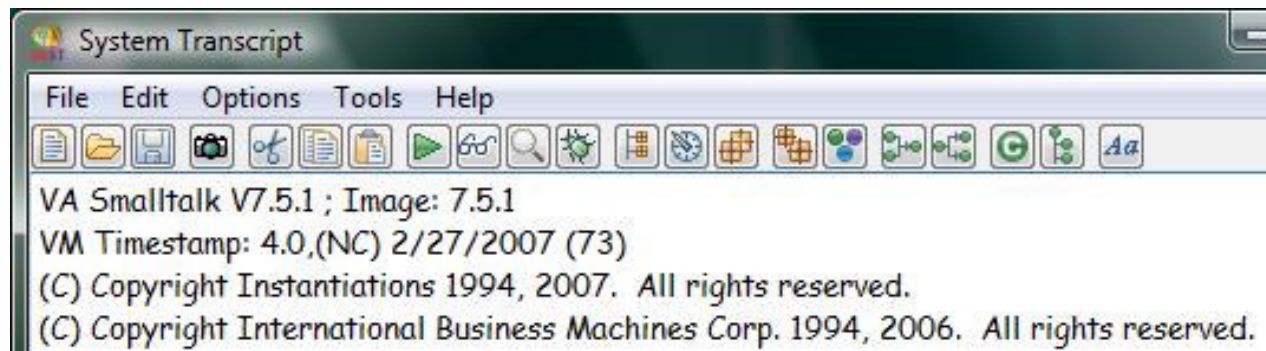


- User-specified install location
  - All files go in selected install directory
  - No restrictions on access/update

# Windows Aero



- Windows Aero is the premium visual experience of Windows Vista
  - transparent glass design
  - subtle window animations
  - new window colors



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# Windows Help



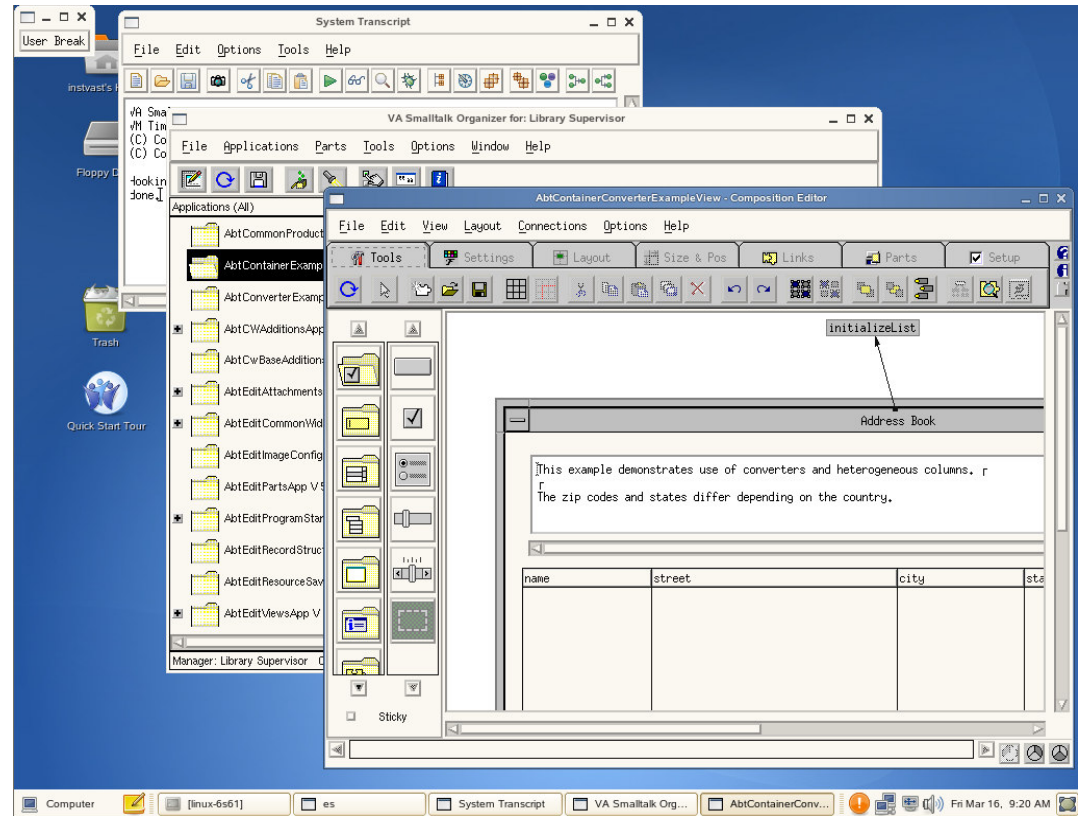
- .hlp files deprecated
  - Must download and install Windows Help to view
  - GF/ST help files converted to .chm files and shipped side-by-side with .hlp files



# SuSE and Ubuntu Linux Support



- X-Window-based graphics
- Motif-based widgets
- Same features as Red Hat Linux
- Standalone and team development environments
- 32- and 64-bit processors supported



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# Windows Large Address Support



- Allows applications to use up to 3GB of address space on Windows
  - VA Smalltalk executables linked with /LARGEADDRESSAWARE option
  - Add /3GB switch to Windows boot.ini file to enable support



# Oracle 10 Features



- LOBs (BLOBs and CLOBs)
  - LOBs are files stored by Oracle with a pointer to the file kept in the DB table
  - Previously, users stored binary data by having the DB table hold the information itself
- Bfiles
  - Bfiles are files controlled by the OS with a pointer to the file stored in the DB table
  - Major disadvantage is if the file is moved or deleted then the Bfile pointer in the DB table becomes invalid
- Timestamp



# Windows Vista themes



- Windows XP introduced new look and feel; Windows Vista enhanced it
  - By default it isn't enabled for VA Smalltalk applications
- How do I enable my application?
  - Manifest is best – handles standard controls
  - Explicit invocation in code necessary for custom controls (ex: User-drawn Button)



# The Manifest



```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<assembly xmlns="urn:schemas-microsoft-com:asm.v1" manifestVersion="1.0">
  <assemblyIdentity version="7.5.0.0" processorArchitecture="X86"
    name="Instantiations.VASmalltalk.abt" type="win32" />
  <description>VA Smalltalk Development Executable</description>
  <!-- Windows Theme support disabled for Windows XP - can be enabled for Windows
    Vista by removing comment delimiters
  <dependency>
    <dependentAssembly>
      <assemblyIdentity type="win32" name="Microsoft.Windows.Common-Controls"
        version="6.0.0.0" processorArchitecture="X86" publicKeyToken="6595b64144ccf1df"
        language="*" />
    </dependentAssembly>
  </dependency>
-->
</assembly>
```



# Affected Controls



## ■ Common Widgets

- TextBox
- MainMenu
- ContextMenu
- HScrollBar
- VScrollBar
- ListBox
- ListView
- ComboBox
- Button
- RadioButton
- CheckBox
- GroupBox

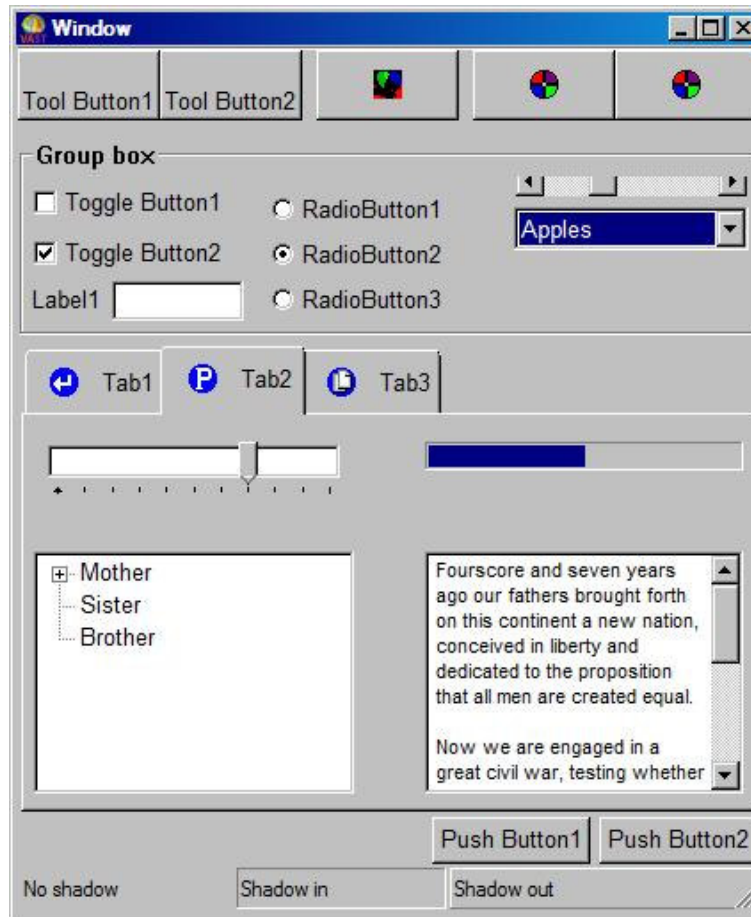
## ■ Windows Controls

- TabControl
- TrackBar
- ProgressBar
- ToolBar
- StatusBar
- TreeView
- DataGrid \*
- RichTextBox \*
- DateTimePicker \*
- MonthCalendar \*
- Splitter \*

\* Control not currently supported by VA Smalltalk

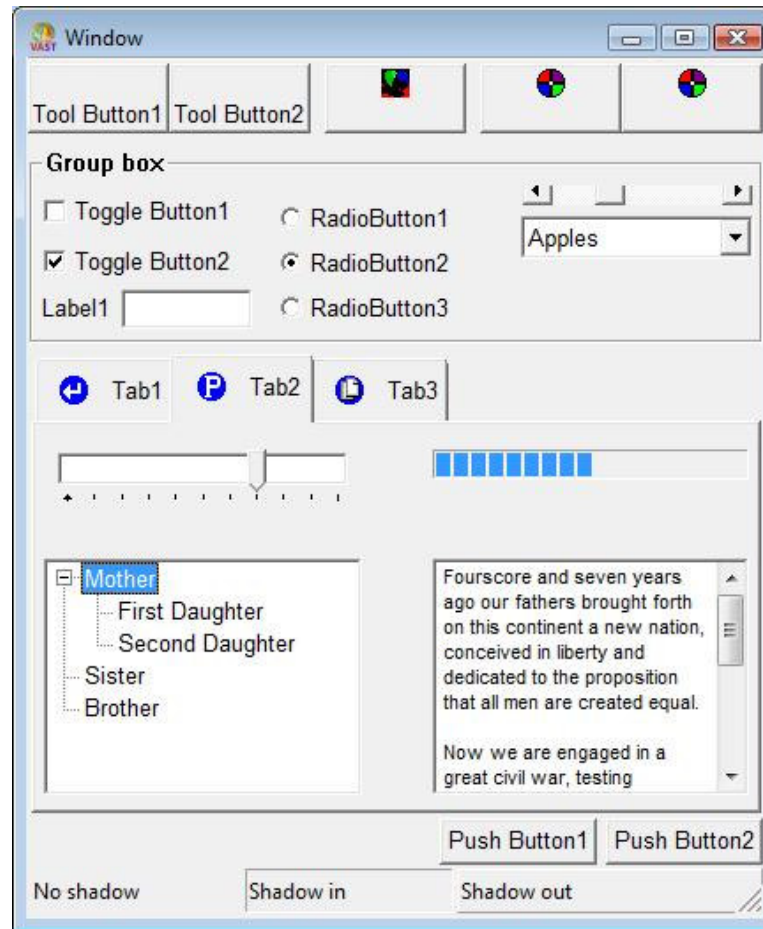
# Windows Classic

- Looks like Windows NT 4.0



# Windows Vista – no manifest

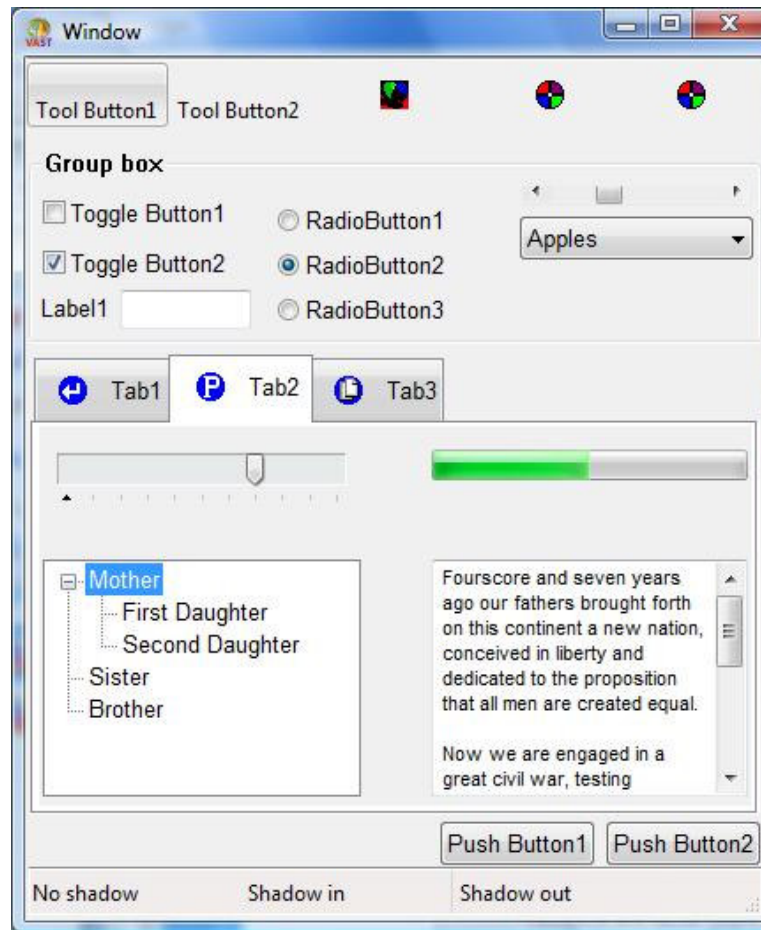
- Identical to Windows XP with no manifest except for Vista window border





# Windows Vista - manifest

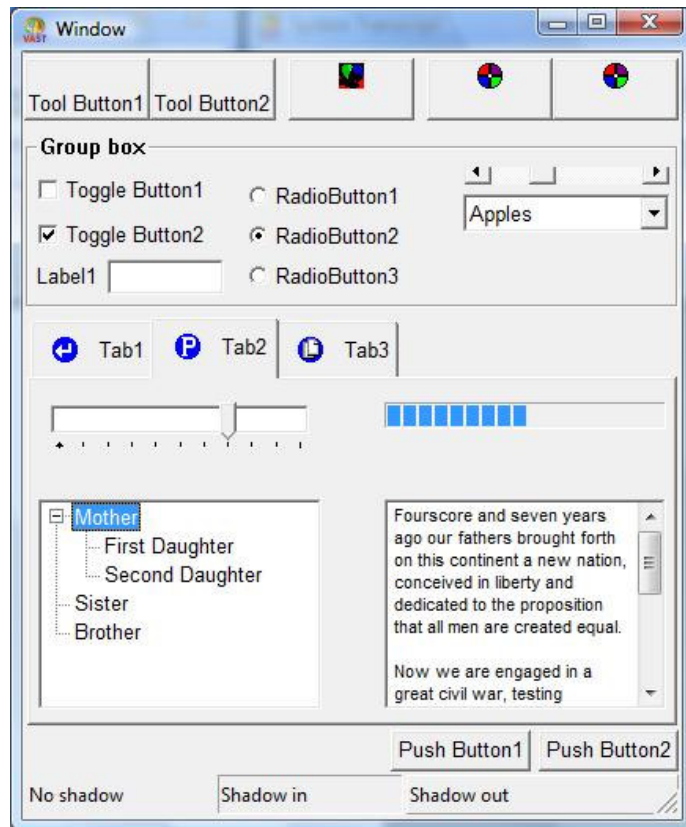
- Full Aero appearance (with sufficient hardware)



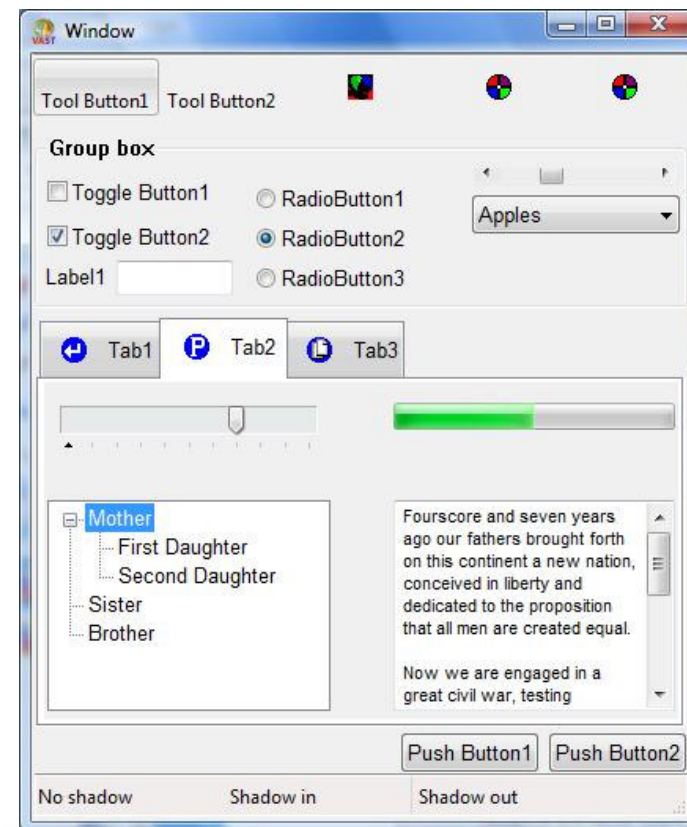
# Windows Theme Comparison



## No manifest



## Manifest





# Windows Themes Additional Items



- WidgetKit add-on products are not theme-aware
- WindowBuilder Pro for Smalltalk uses only widgets from base VA Smalltalk (including user-drawn widgets) and so is as theme-aware as base VA Smalltalk



# Web Services Demo



- The Web services demo steps you through converting a group of Smalltalk classes into a web service
- Based on the web services insurance example
- Allows you to inspect a live web services framework

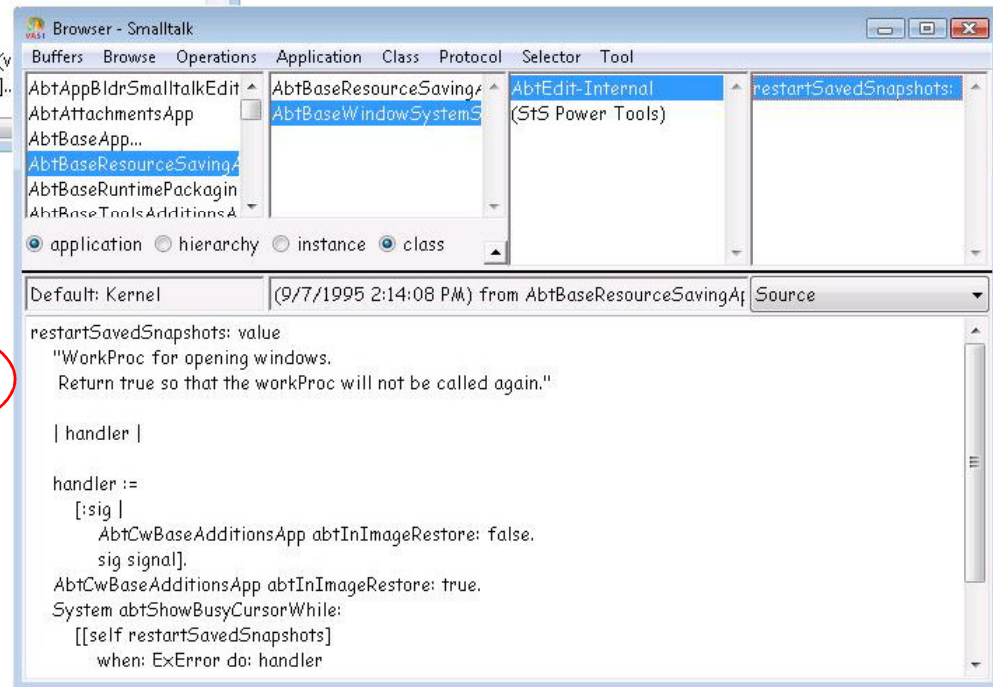
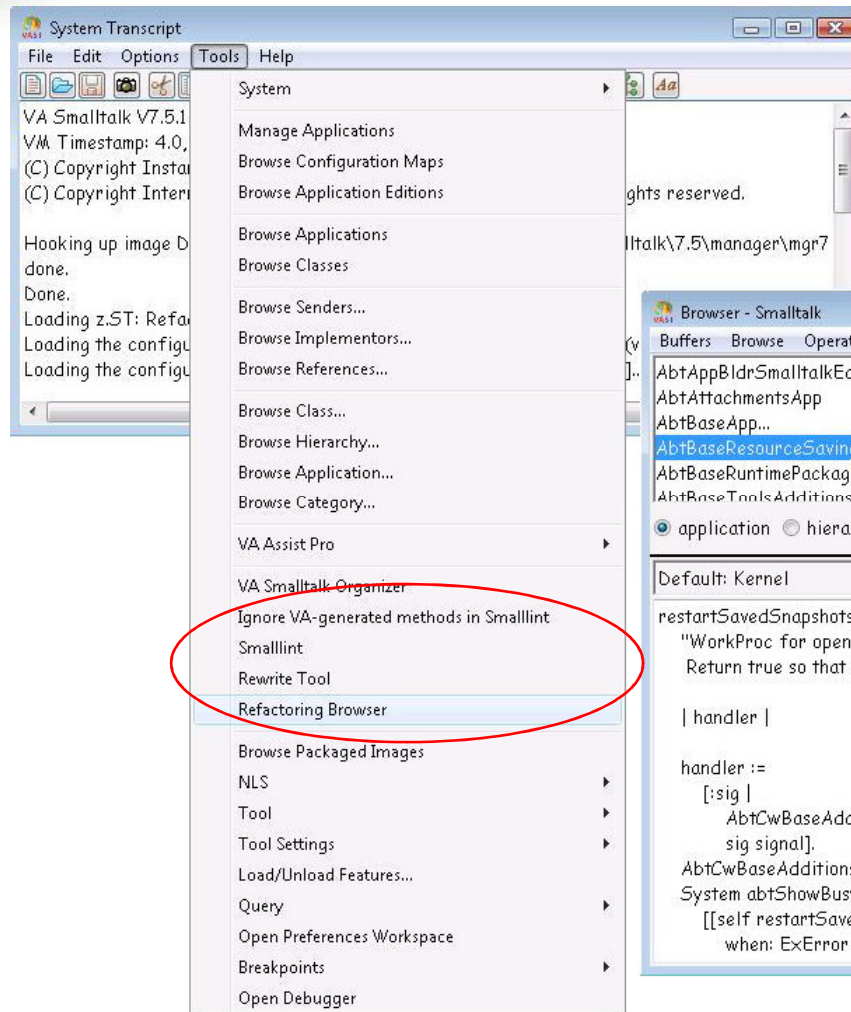


# Refactoring Browser and Mastering Envy Developer RB Extensions



- Both the Refactoring Browser and the MED extensions load as a single feature
- Refactoring Browser launches from:
  - Tools Menu on the System Transcript
  - Classes and Class menu pulldown on standard browsers
- MED Extensions are added to Classes and Class menu pulldown on standard browsers

# Refactoring Browser



# MED Extensions



The screenshot shows the 'String Hierarchy Browser: String' window. The 'Class Variables' menu item is circled in red. A context menu is open over it, showing options like 'References...', 'Readers...', 'Writers...', 'Add...', 'Rename As...', 'Remove...', 'Push Down...', 'Pull Up...', 'Create Accessors...', 'Abstract...', and 'Protect/Concrete'. Another context menu is open over the 'Class' menu item, showing options like 'Add Extension...', 'Create Subclass...', 'Rename As...', 'Remove...', 'Safe Remove', and 'Convert to Sibling'. The status bar at the bottom indicates 'String V 6.0.2 [57] (Defined) in CLDT'.

# SUnit Browser



- Framework for developing unit and integration test suites in Smalltalk
- Test browser locates and runs selected tests and reports results

SUnit Browser - TestCase

File Browse Test Configuration Help

Run All Run Debug Step Analyze Reset Remove Exit

- Pass [incomplete] -

Method	Correct	Failures	Errors	Not Run	Total
● ExampleSetTest	0	0	0	6	6
● ResumableTestFailureTestCase	0	0	0	1	1
● SimpleTestResourceTestCase	0	0	0	3	3
● SUnitBrowserModelShowErrorsTC	0	0	0	9	9
● SUnitBrowserModelITC	0	0	0	9	9
● SUnitBrowserResultTC	0	0	0	11	11
● SUnitTest	1	0	0	12	13
● SUnitTest>>#testAssert	0	0	0	1	1
● SUnitTest>>#testDefects	0	0	0	1	1
● SUnitTest>>#testDialectLocalizedException	1	0	0	0	1
● SUnitTest>>#testError	0	0	0	1	1
● SUnitTest>>#testException	0	0	0	1	1
● SUnitTest>>#testFail	0	0	0	1	1
● SUnitTest>>#testIsNotRerunOnDebug	0	0	0	1	1
● SUnitTest>>#testRan	0	0	0	1	1
● SUnitTest>>#testRanOnlyOnce	0	0	0	1	1
● SUnitTest>>#testResult	0	0	0	1	1
● SUnitTest>>#testRunning	0	0	0	1	1

All 1 passed, 0 failure(s), 0 error(s) out of 52 test(s)





# Acknowledgments



- Thanks to John Brant for developing the original Refactoring Browser and Niall Ross and his CampSmalltalk compatriots for maintaining and extending it
- Thanks to Joseph Pelrine ([www.metaprogramming.com](http://www.metaprogramming.com)) for permission to include the Mastering Envy Developer Tools
- Thanks to Kent Beck for the original SUnit testing framework, Joseph Pelrine and his CampSmalltalk compatriots for maintaining and extending it, and Jeffrey Odell for the SUnit Browser



## ENVY/QA



- A Set of 5 Quality Assurance Tools Plus a Framework
  - Code Critic
  - Code Metrics
  - Code Coverage
  - Code Formatter
  - Code Publisher
  - Extensible QA Framework



# Code Critic



- Analyzes methods, classes, applications, and configuration maps for potential common problems.
- Has an extensible set of reviews.
  - A review is a specific type of measure that executes over code elements, and either completes successfully or produces warnings.
- Integrates fully with the existing development browsers
  - Use **Tool->Review** in applicable development browsers.
- Lets you customize settings, save and load them from files.
- Provides an open and extensible framework that lets you easily create new code reviews

# Code Critic Settings



The screenshot shows the 'Code Critic Settings' dialog box in the VA Smalltalk environment. The 'System' menu is open, and the 'Review...' option is highlighted with a red circle. The 'Code Critic Settings' dialog has the 'Inheritance' category selected, with the following options checked:

- Identical to inherited method
- Not implemented in superclass
- Public/private inconsistency
- Should call superclass
- Should not be implemented
- Subclass responsibility
- Subclasses base class

The 'Advanced Settings' dialog box is also visible, showing a list of reviews and a 'Preference Value' field. The 'By Type' radio button is selected.

Reviews:

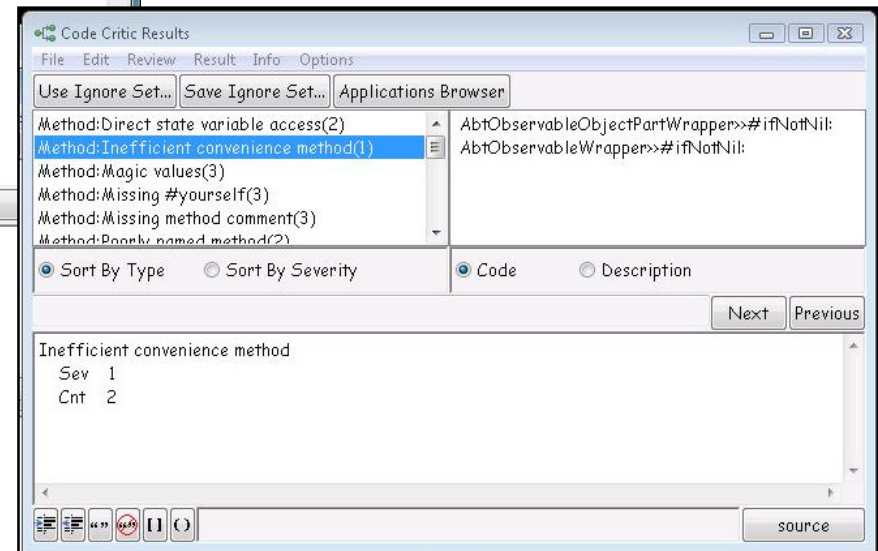
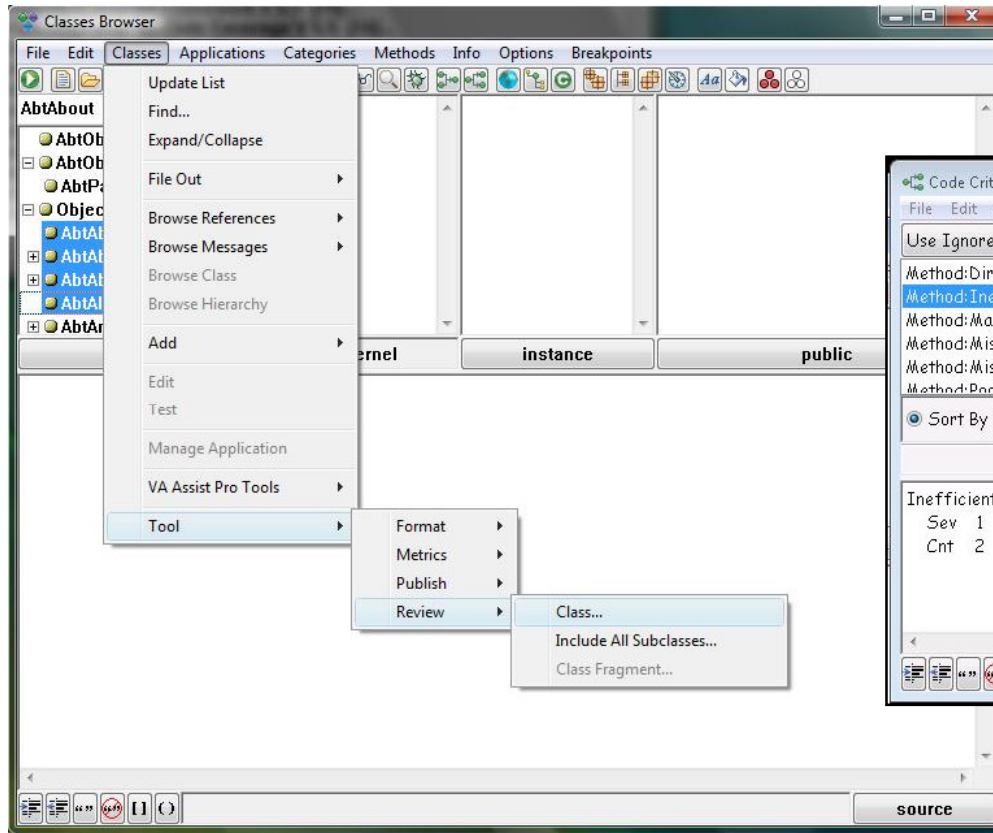
- Method - References global variables
- Method - References outside prereq chain
- Method - References own class
- Method - Reimplements system method
- Method - Sends system method
- Method - Sent but not implemented
- Method - Should call superclass
- Method - Should not be implemented
- Method - Should use isEmpty
- Method - Too many consecutive concatenation
- Method - Too many consecutive messages

Preferences:

Preference Value:

By Type  By Label

# Code Critic Results





# Code Metrics



- Compute a set of static metrics for code
- Fully integrated with the development browsers
- Provides an extensible set of metrics, which:
  - Are specific types of measures that execute over code elements and return a numerical result
  - Have an upper and a lower threshold
    - Results between these thresholds are in range
    - Other results are out of range and need to be examined in more detail
- Typical uses:
  - Isolate areas of the system that are highly coupled
  - Estimate the complexity of a component
- Results are viewed using the **Code Metrics Results Browser**
  - Code elements can be modified in this browser

# Code Metrics Settings



The screenshot illustrates the workflow for configuring code metrics in VA Smalltalk. It shows three overlapping windows:

- System Transcript:** The main application window with the 'Tools' menu open. The 'Metrics...' option is circled in red.
- Code Metrics Settings:** A dialog box with a list of metrics on the left (Complexity, Coupling, Decomposition, Inheritance, Interface, Size) and checkboxes on the right for 'Cyclomatic complexity', 'Lorenz complexity', and 'Method Density'. Buttons for 'All', 'None', 'Reset All', and 'Advanced...' are also present.
- Advanced Settings:** A dialog box with a 'Metrics' list on the left and a 'Preferences' list on the right. The 'By Type' radio button is selected. A 'Save Value' button is at the bottom.

# Code Metrics Results



The screenshot shows the Applications Browser window with the 'Tools' menu open, highlighting the 'Metrics' option. The Code Metrics Results window displays the following data:

Metric	Value
Method: Lines of code	+AbtBaseApp class in AbtBaseApp
Method: Lorenz complexity	+AbtBaseSwapperCrossloading class in AbtBaseSwap
Method: Memory size for methods	+AbtIndexedDictionary class in AbtBaseApp
Method: Method Density	+AbtIndexedIdentityDictionary class in AbtBaseApp
Method: Statements	+AbtMessageToSignalEvent class in AbtBaseApp
Class: Accessors	+AbtObservableObject class in AbtBaseApp
Class: All class methods	
Class: All instance methods	
Class: All instance variables	

Metric	Value
All class methods	
Cnt	10
Total	1535
Avg	153.5
Min	66
Max	481
Dev	148.85





# Code Coverage



- Help determine whether test cases provide complete test coverage
- Common uses:
  - Evaluate test cases as you develop the software
  - Design test cases that maximize the test coverage of applications
  - Set up reusable test coverage configurations
  - Verify the amount of coverage obtained by regression test suites
- Integrated fully with development browsers

# Code Coverage Results

The screenshot displays the VA Smalltalk 7.5.5 interface. The main window is the Applications Browser, showing a tree view of classes under 'Object'. The 'AbtBaseSwapperCr' class is selected. A 'Code Coverage Browser' window is open, showing the coverage for the selected class. The coverage is 0/4 (0.0%). The 'Code Coverage Browser' window also shows the class hierarchy and the class instance variable names. A dialog box is open, providing information about code coverage: 'Your applications are now being watched. You can now execute/test them as you normally would. As you execute your applications you can return to this browser to see the level of coverage achieved. Press the pause button (toggle) to temporarily disable coverage of executing methods. Press it again (resume) to continue with testing.' The dialog box has an 'OK' button.

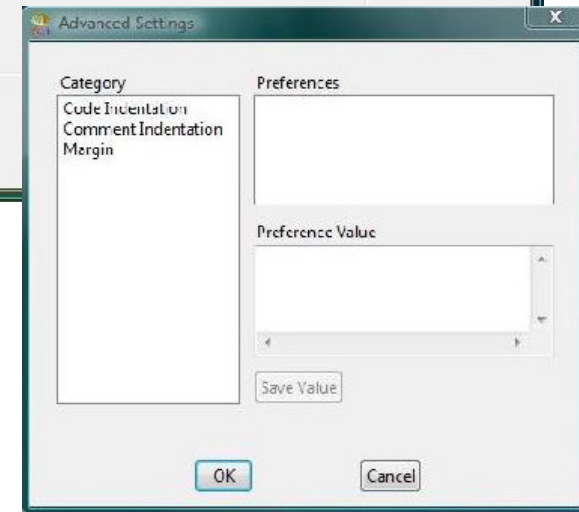
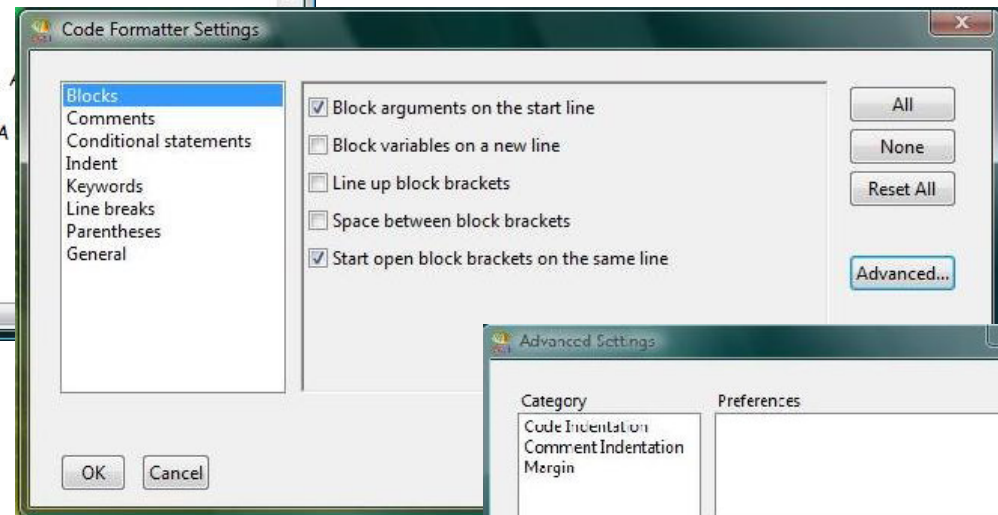
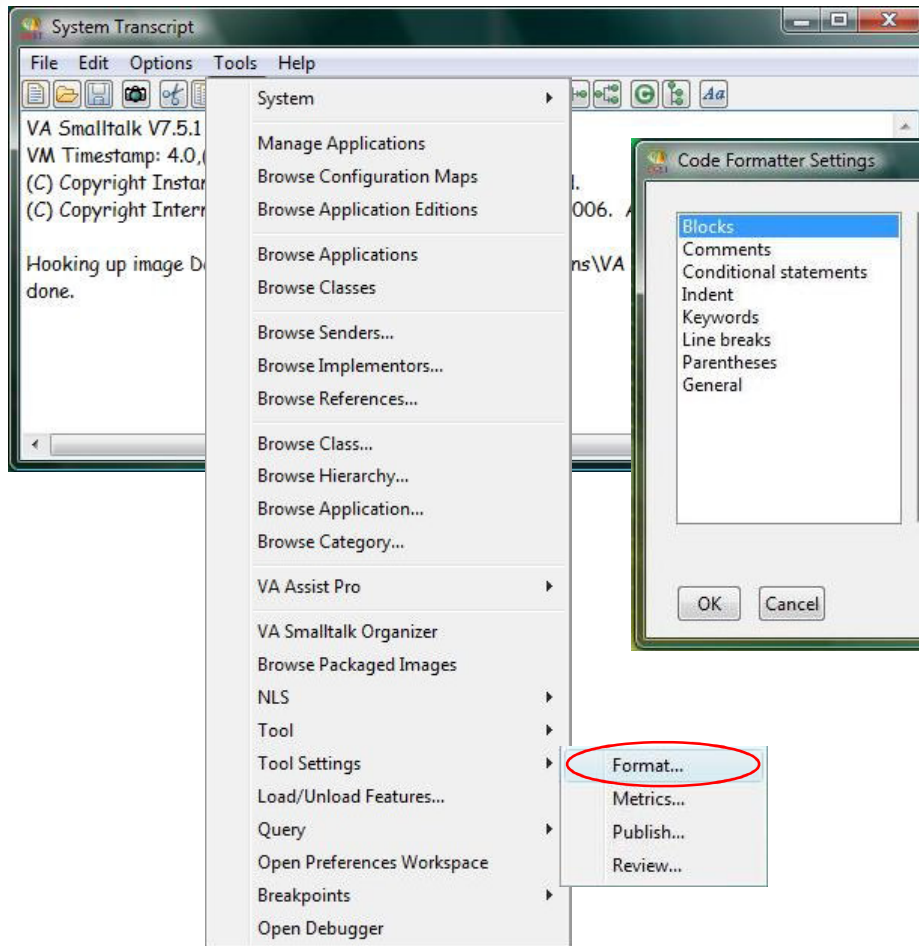


# Code Formatter



- Format Smalltalk source code
- You can format:
  - Classes
  - Class hierarchies
  - Applications
  - Configuration maps
  - Method source while you are editing it
- Custom controls let you define your preferred formatting style
- Preview mechanism lets you determine quickly how the code will look

# Code Formatter Settings



# Code Formatter Results



The screenshot shows a software interface for a code formatter. On the left, a class browser displays a tree structure with the class `AbtAbstractCodePageConverter` selected. The main window shows a list of methods, with `convertToMbcPSZ:` highlighted. A context menu is open over the method list, showing options like `Format`, `Metrics`, and `Review`. A `Confirm` dialog box is displayed in the foreground, with the message "The method(s) will be formatted." and buttons for `OK`, `Cancel`, and `Settings...`. The bottom status bar shows the date and time: `{3/24/2000 2:18:32 PM}`.



# Code Publisher



- Produces typeset-quality manuals from applications, classes, and methods
- Customizable structure can easily create documents such as:
  - Only the API methods and their comments
  - In-depth manuals containing code, cross-reference tables, and quick look-up indexes to be used during code reviews
- Code Publisher can produce various formats:
  - LaTeX
  - RTF
  - MIF
  - HTML
  - SGML (OTIML DTD)
- HTML manuals
  - Are internally hyperlinked to let you navigate easily online
  - Embedded GIF images are included in HTML output to further improve readability

# Code Publisher Settings



The screenshot displays the VA Smalltalk Applications Browser interface for 'AbtBaseApp V 6.0.3 [60]'. The 'Applications' menu is open, showing options like 'Available', 'Find Application...', 'File In...', 'File Out', 'Browse Changes', 'Browse Editions', 'Manage Application', 'Configure Application', 'Locate Application', 'Load', 'Unload', 'Create', 'Subapplications', 'Set As Default', 'Create New Edition', and 'VA Assist Pro Tools'. The 'Tool' submenu is also visible, containing 'Coverage', 'Format', 'Metrics', 'Publish', and 'Review'. The 'Publish' option is selected, leading to the 'Code Publisher Output Options' dialog box. This dialog box has a 'Document Title' field set to 'AbtBaseApp', an 'Output' section with a 'File' field set to 'output' and a 'Browse...' button, and radio buttons for 'HTML' (selected), 'MIF', 'OTIML', and 'RTF'. Below this is an 'Advanced' section with 'Settings...' and 'Categories To Publish...' buttons. The 'Code Publisher Settings' dialog box is also open, showing a list of categories on the left: 'Application', 'Class', 'Method', 'Cross reference', and 'General'. On the right, several checkboxes are checked: 'Application all prerequisites list', 'Application class', 'Application class hierarchy', 'Application immediate prerequisites list', 'Extended classes', 'Private classes', and 'Public classes'. There are 'All', 'None', and 'Reset All' buttons on the right side of the settings list. At the bottom of the dialog are 'OK', 'Cancel', 'Save To File...', and 'Load From File...' buttons.



# Extensible QA Framework



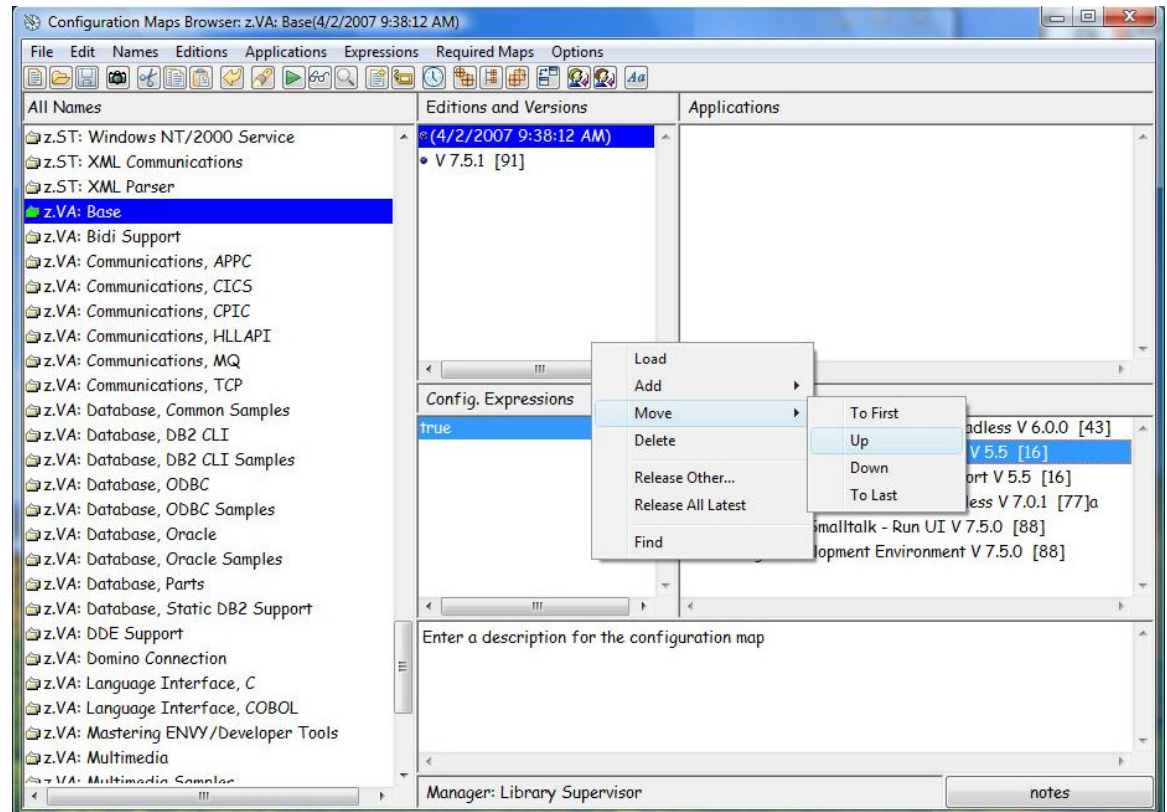
- Build new QA tools without learning the details of the browsers
- **ENVY/QA** built using an open and extensible tools framework
  - Use to develop new QA tools easily
  - Tool registers the types of objects on which it operates
  - Framework ensures that tool is displayed in the appropriate development browsers



# Configuration Maps Browser



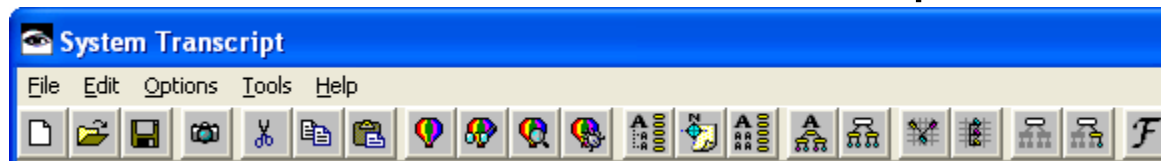
- Required Maps lineup management
  - Required Maps -> Move submenu extended w/ **Up** and **Down**
  - Complements **To First** and **To Last**
  - Enabled in base and VA Assist
  - Complements VA Assist drag-and-drop approach



# Updated Browser Icons



- Old icons used unmasked bitmaps

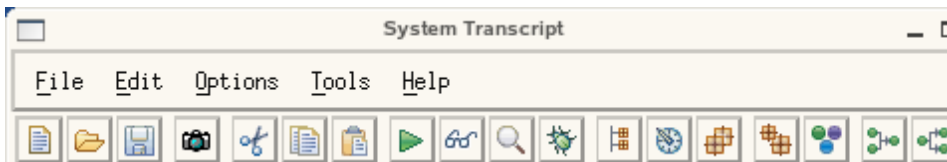


- New icons look good on all platforms

- Windows



- Linux





# Agenda

- Introduction
- VA Smalltalk 7.5.2
- **Future Directions**
- Stats
- Q&A





# Future Directions

- Seaside
- Web Services
- IDE Enhancements
- Install
- Database
- Documentation





## Seaside Motivation



- Several web presence frameworks
  - WebConnect
  - Web services
- Each has its strength, but all are heavy-weight
- Smalltalk community seems to be coalescing on one primary approach



# Seaside Status



- Currently porting Seaside 2.8 to VA Smalltalk
- Running on Server Smalltalk (SST)
  - Using built-in HTTP(S) server
  - Using external HTTP(s) server such as Apache
- Challenges
  - Continuations rely on underlying execution state reification (context) which has a different implementation
  - Class library differences



# Seaside Approach



- Investigate ‘adapting’ VA Smalltalk context implementation to support continuations
- Map roles and responsibilities of Squeak classes used by Seaside to VA Smalltalk classes
- Initial Steps
  - Make Counter Example work in VA Smalltalk
  - Create Seaside Compatibility Layer to keep API consistent (use SPORT?)



# Web Services Tools



- XML editor
- Ease the translation between XML and Smalltalk classes
- Automate the definition of a Smalltalk-based web service
- Diagnostic tools
  - TCP/SOAP Monitor





# Web Services Information



- Improve documentation
  - How the framework processes WSDL
  - How XML data is mapped to Smalltalk classes
  - How SOAP messages are sent/received
- Add examples and test cases addressing the basic building blocks of a web service
  - complex data types
  - soap messaging



# IDE Enhancements



- Consolidate IDE branches and extensions functionality into standard browsers
  - Trailblazer
  - VA Organizer (and its children)
  - VA Assist
  - ENVY/QA
  - RB
  - Mastering ENVY/Developer
- On Windows, move IDE onto Windows Controls
- Reorganize/enhance examples; make all examples available from Examples Launcher



# Install



- Single install package for client/manager
  - Initial install
  - Reinstall of current release (aka “repair”)
  - Upgrade install of fix pack
  - Uninstall
- Work seamlessly on Vista with User Account Control (UAC)
- Work on all supported \*nix platforms without manual intervention



# Database



- Evaluate and schedule enhancements
  - DB2 V9
  - Oracle 11g
- Evaluate porting GLORP for object persistence



# Documentation



- Replace existing HTML help with PDF or CHM
- Maintain cross-book search capability
- Maintain invocation from VA Smalltalk menus and F1



# Agenda

- Introduction
- VA Smalltalk 7.5.2
- Future Directions
- **Statistics**
- Q&A





# VA Smalltalk Statistics



- >6000 downloads
- >2200 active users (>15% increase in last 12 months)
- >225 customer companies
  
- >130 forum threads
- >550 forum posts
- >800 support cases
- >200 bugs fixed since 7.0



# More info about VA Smalltalk



**General Info:** vast@instantiations.com

**Sales:** sales@instantiations.com

**Support:** vast-support@instantiations.com

**John O'Keefe:** john\_okeefe@instantiations.com

**Forum:** www.instantiations.com/forum

Slides available at <http://www.instantiations.com/company/detail/smalltalk-events.html>


**VA Smalltalk<sup>7</sup>**

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# Questions?



**VASmalltalk<sup>™</sup>7**  
Version 7.5.2

*Proven Power  
and  
Productivity<sup>™</sup>*

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Slides available at  
<http://www.instantiations.com/company/detail/smalltalk-events.html>

**VASmalltalk<sup>™</sup>7**

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# Backup charts





# Our Smalltalk History



Instantiations has contributed to the Smalltalk industry continuously since 1984.

- ➔ 1984: Instantiations' co-founders developed the world's first commercial version of Smalltalk at Tektronix.
- 1988: Founded Instantiations Inc. (first incarnation) and became one of the most prominent Smalltalk product and consulting companies in the world.
- 1992: Instantiations acquired by Digitalk, Inc. and lead design & development of Digitalk's VSE product line.
- ➔ 1990's: Digitalk was a major partner of IBM in the creation and marketing of Smalltalk technology.
- 1993: Co-founders of Instantiations founded ObjectShare Systems, a major Smalltalk product vendor and creator of WindowBuilder Pro & WidgetKits, which was acquired by ParcPlace-Digitalk in 1996.
- 1995: Digitalk was acquired by ParcPlace forming ParcPlace-Digitalk. Current Instantiations employees made major contributions to the development and marketing of VisualWorks™ Smalltalk.
- ➔ 1997: Instantiations Inc. (second incarnation) was formed in 1997 by the Tektronix/ Instantiations/ ObjectShare team. The company has offered products and services to the Smalltalk industry since its inception.
- ➔ 2004: IBM and Instantiations form relationship where Instantiations provides support for VisualAge® Smalltalk.
- ➔ 2005: IBM and Instantiations form relationship under which Instantiations releases VA Smalltalk 7.0.
- 2006: VA Smalltalk 7.0.1 released.
- ➔ 2007: VA Smalltalk 7.5, 7.5.1 and 7.5.2 released with support for Windows Vista, SuSE, Ubuntu, SUnit and Refactoring Browser.

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# User Account Control - 4



```
ca: Command Prompt
Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Users\instvast>cd /d c:\Program Files\Instantiations\VA Smalltalk\7.5\bin

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>emsrv -install -u instvast
-p smalltalk -s0 -w "%APPDATA%\Instantiations\VA Smalltalk\7.5"
could not set event message file

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>

ca: Administrator: Command Prompt
Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd /d c:\Program Files\Instantiations\VA Smalltalk\7.5\bin

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>emsrv -install -u instvast
-p smalltalk -s0 -w "%APPDATA%\Instantiations\VA Smalltalk\7.5"
EMSRV installed.
Message file emsrvmsg.dll copied to C:\Windows\system32\emsrvmsg.dll.

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>
```

```
ca: Command Prompt
Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Users\instvast>cd /d c:\Program Files\Instantiations\VA Smalltalk\7.5\bin

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>emsrv -remove
OpenSCManager failed - OS error 5: Access is denied.

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>

ca: Administrator: Command Prompt
Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd /d c:\Program Files\Instantiations\VA Smalltalk\7.5\bin

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>emsrv -remove
EMSRV removed.

c:\Program Files\Instantiations\VA Smalltalk\7.5\bin>
```

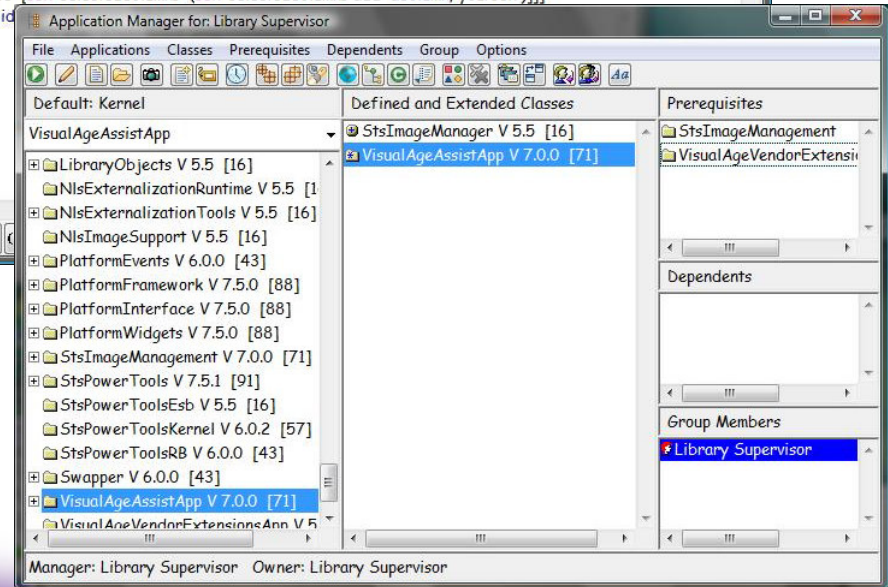
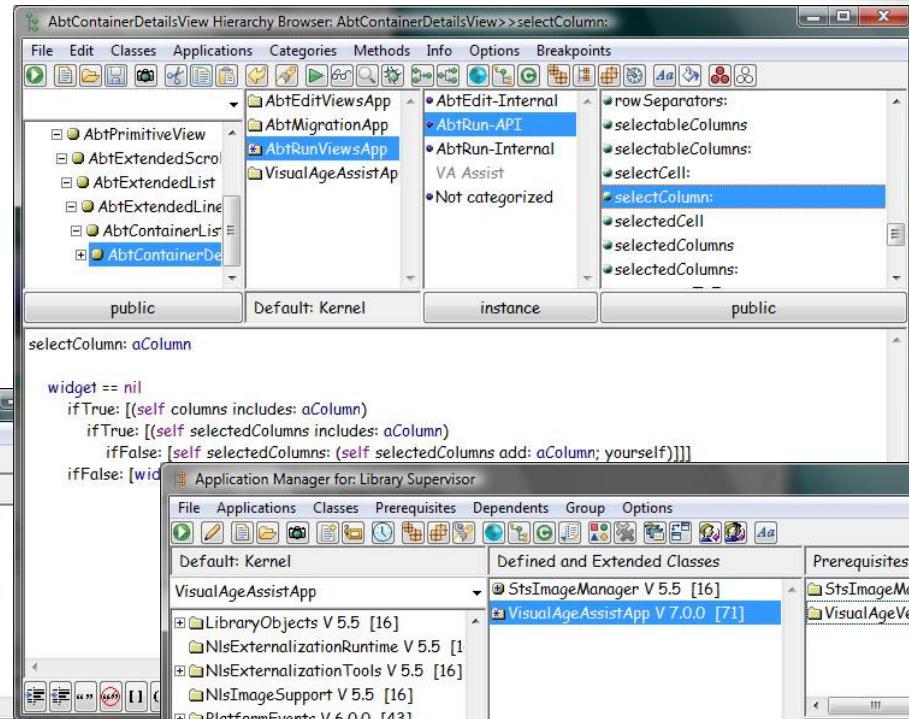
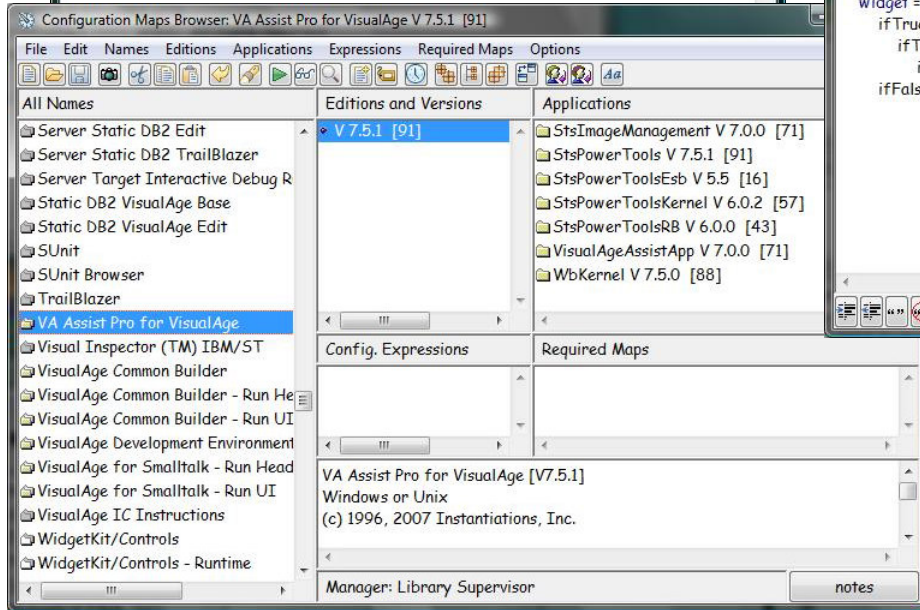
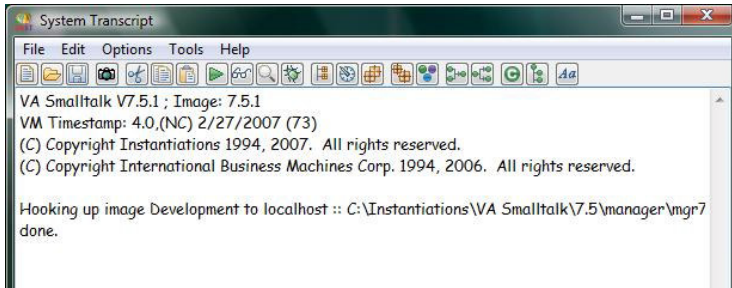


## File / Registry Location - 0



- Per-machine
  - %ProgramFiles%
  - HKLM\Software
  - HKLM\System\CurrentControlSet\Services
- Per-user
  - %UserProfile%\My Documents

# Windows Aero - Examples



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# Native Oracle 10 Support



**Database connection specifications**

All loaded connection specifications

Alias	Database manager	Database name	Prompt?	Active?
oracle10NativeConnection	Oracle 10	Current Oracle Database	Yes	Yes
oracleNativeConnection	Oracle 8	Current Oracle Database	Yes	No

OracleAccessSetApp connection specifications

Alias	Database manager	Database name	Prompt?	Active?
oracle10NativeConnection	Oracle 10	Current Oracle Database	Yes	Yes
oracleNativeConnection	Oracle 8	Current Oracle Database	Yes	No

New... Update... Delete Close Help



# LOBs - 1



- BLOBs and CLOBs are handled the same way in VA Smalltalk 7.5
- Steps for manipulating LOBs are:
  - Step 1 – Create the table

```
connection createTableNamed: 'blob_table' definition:  
'(id number, data blob)'.
```

- Step 2 - Insert an Empty LOB

```
table := connection openTableNamed: 'blob_table'.  
(newRow := table emptyRow)  
    at: #ID put: 1;  
    at: #DATA put: AbtOracleEmptyBlob new.  
table addRows: (OrderedCollection with: newRow).
```





## LOBs - 2



- Step 3 - Write data to the LOB

```
sqlString := 'select * from blob_table where id = 1  
for update'.
```

(Note: The 'for update' is important as it locks the DB row).

```
lobLocator := (dict at: 'DATA') locatorAddress.
```

```
AbtOracleLobBuffer new
```

```
writeFileToLob: lobLocator
```

```
file: fromFile
```

```
connection: connection
```



## LOBs - 3



- Reading Data from a LOB

```
sqlString := 'select * from blob_table where id = 1'.
lobLocator := (dict at: 'DATA') locatorAddress.
filename := CwFileSelectionPrompter new title: 'Output
file'; prompt.
AbtOracleLobBuffer new
  writeLobToFile: toFile
  lob: lobLocator
  connection: connection
```



# SQL & PL/SQL - 1



- Bugs fixed for Oracle:
  - 7.5 24225 - Cannot invoke stored procedures without parameters
  - 7.5 24226 - nullsOk is preset incorrectly for host variables
  - 7.5 24227 - implementsStoredProcs should be a class method
  - 7.5 24228 - Oracle RAW fields broken with 6.0.3 change
- The following high level code did not work in previous versions of VA Smalltalk when using native Oracle:

```
table := connection openTableNamed: 'test1'.  
rows := Array new: 30.  
“add rows to the ‘rows’ ivar”  
table addRows: rows ifError: [:ex | ex inspect].
```



## SQL & PL/SQL - 2



- Example SQL Scripts Included
  - Creating tables at a high level
  - Inserting and Selecting Rows at a high level
  - Manipulating Rows at a lower level
  - Executing SQL statements directly
- Example PL/SQL Scripts Included
  - Passing in/out simple types like Date, Strings, and Numbers
  - Passing in and out array or numbers and strings
  - Not implemented yet is passing a cursor in/out as a variable
- Complete examples come with the product and are downloadable from <http://www.instantiations.com/>

# Web Services Demo - 2



The screenshot shows a software interface titled "Web Services in 10 minutes". On the left is a tree view with the following items:

- ▼ SstWebServicesInsuranceExam
- SstWSAddress
- SstWSInsurancePolicy
- **SstWSInsurancePolicyInterface**
- SstWSPerson
- ▶ SstWebServicesInsuranceExa
- ▶ SstWebServicesInsuranceExa

The right pane displays the details for the selected **SstWSInsurancePolicyInterface**:

**SstWSInsurancePolicyInterface** represents an insurance policy.

It reads a list of policies from external XML resource files shipped with the product and converts them to business objects using a DOM document as an intermediary.

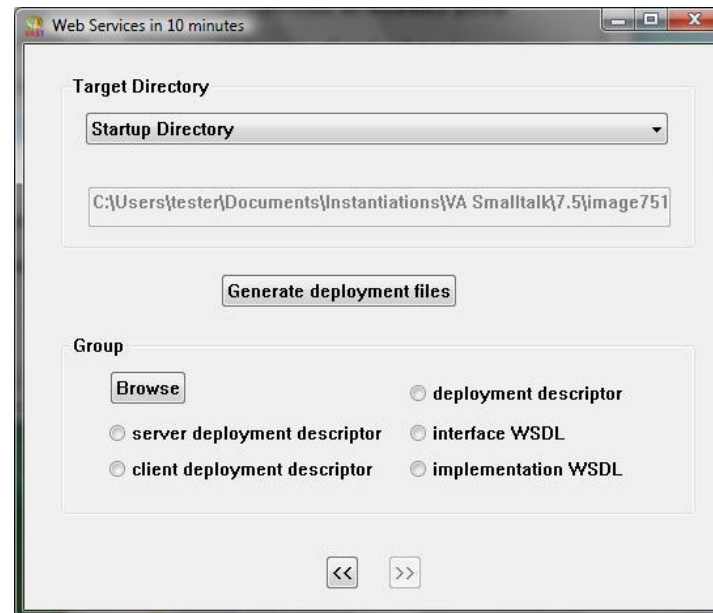
It describes the operations of the web service interface. These operations are found in methods belonging to the category '@WS-API.'

A tool uses methods belonging to this category to generate XML files describing the web service.

# Web Services Demo - 3



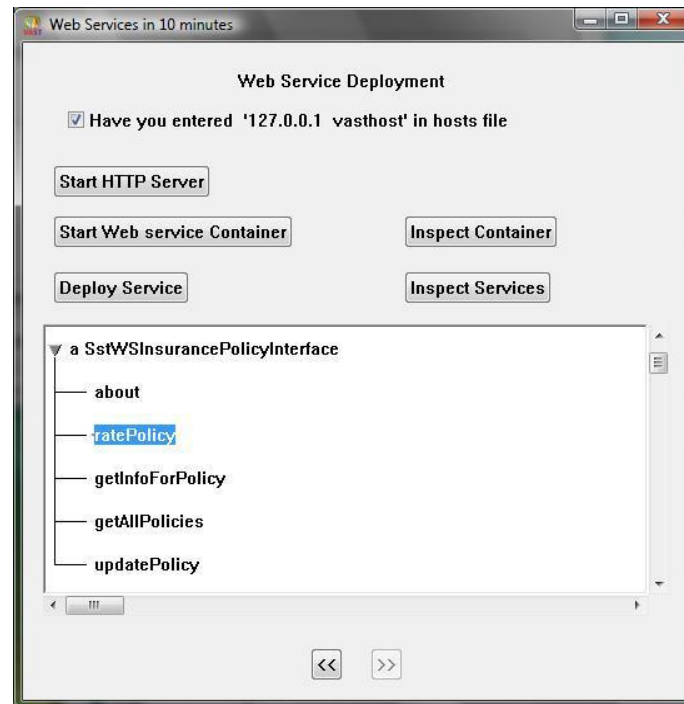
- Uses tool to generate deployment descriptor and interface definition XML files required by every web service



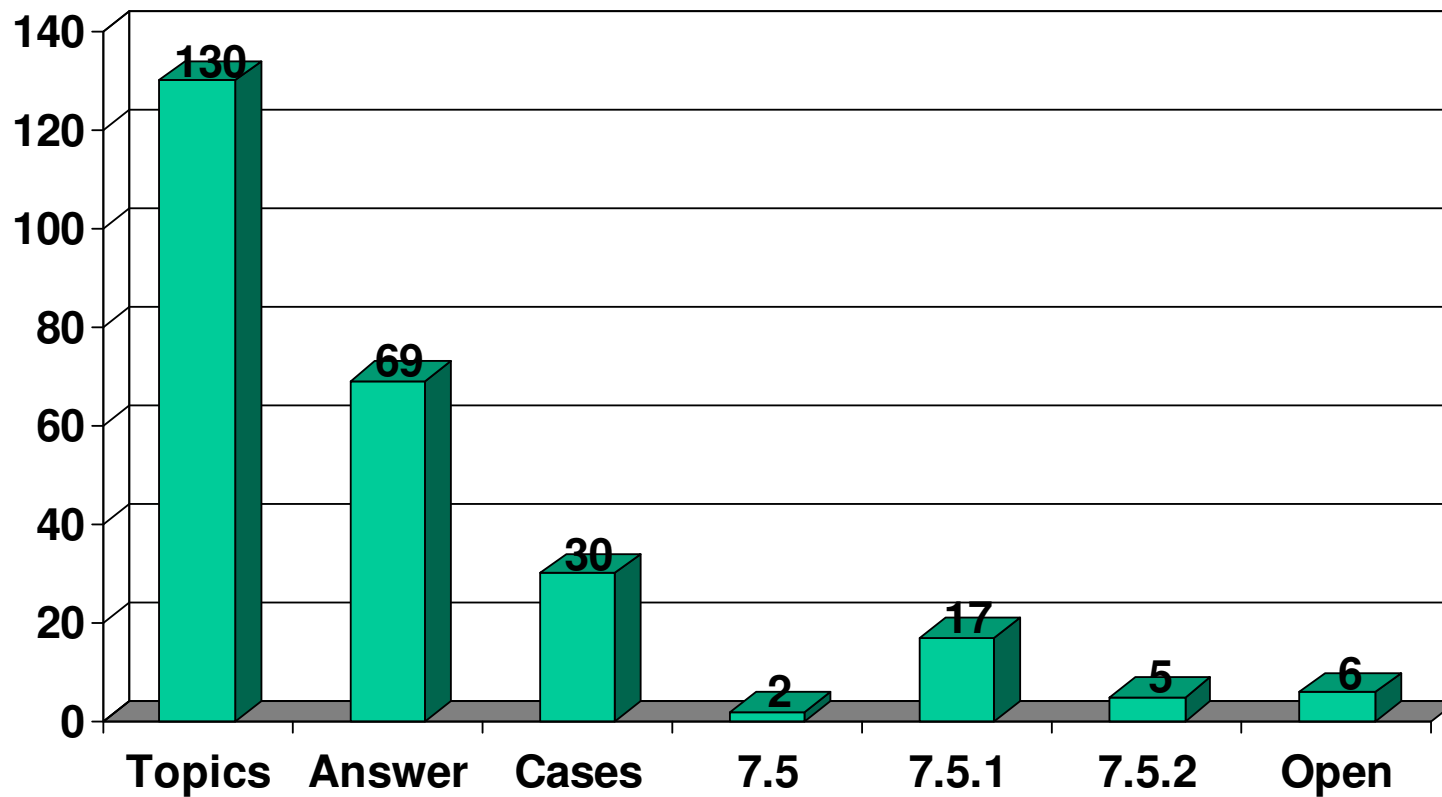
# Web Services Demo - 4



- Deploys and invokes the service using the web service framework and the XML files

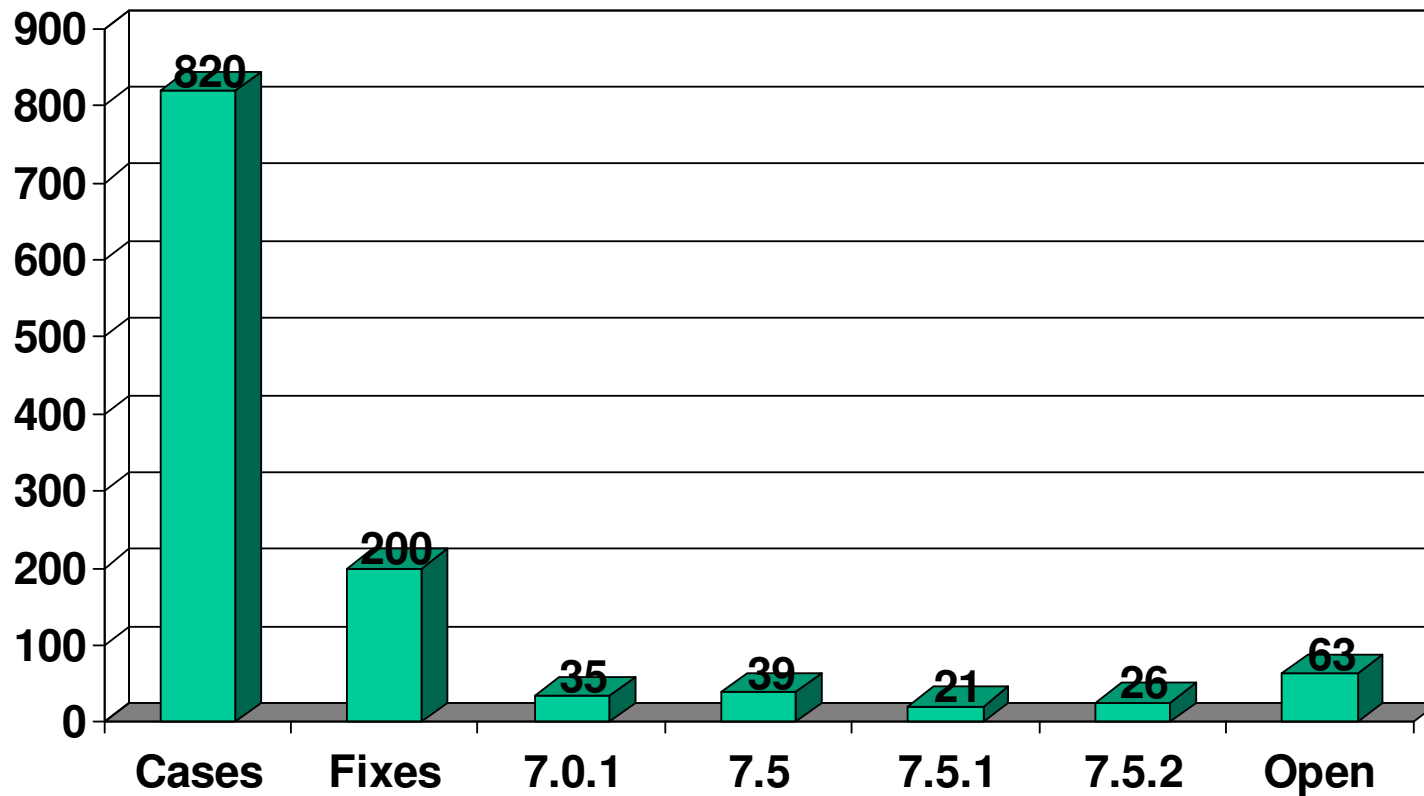


# VA Smalltalk Forum





# Technical Support



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