



VA Smalltalk Update

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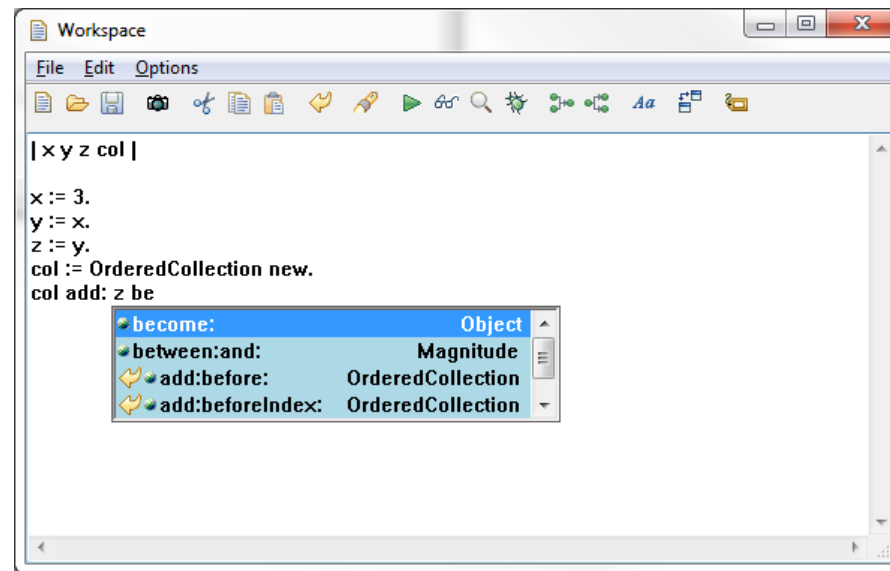
Recent Release History

- V8.5 (August 2011)
- V8.5.1 (March 2012)
 - See following slides
- V8.5.2 (September 2012)
 - See following slides

Development Tools

Code Completion

- **Problem:** The limits of memory - we can only remember 4 things at a time
- **Solution:** Use the computer's calculating capabilities to predict names as they are being entered in the text editor



Development Tools – V8.5.1

Code Completion Enhancements

- CamelCase matching
 - Range of matching from Very Strict to Very Lenient
- Character literal completion
- Popup list mini-toolbar
- DnD-enabled suggestions
- Additional configuration options
 - 12 new configurable policies
 - Popup list foreground/background colors

Development Tools – V8.5.2

Code Completion Enhancements

- Code Completion added to Inspectors

Development Tools – V8.5.2

Monticello Importer

- Replacement for VAPackageExporter
- Imports from .mcs files
- Maps Monticello structure
 - Package -> Application
 - Name taken from package name in .mcs
 - Holds extension methods
 - Categories -> SubApplication(s)
 - Name(s) based on categories
 - #loaded/#removing class methods generated
 - Holds defined classes
 - Pool classes -> Pool Dictionaries
 - Class renamed and `_PRAGMA_` method created
- Includes zip/unzip support (beta)
- Demo (if time)

Infrastructure – V8.5.2

Time Zone Support

- Supported by DateAndTime class
 - Used in conversion between time zones
 - Used in arithmetic operations that span DST transitions
- Time Zone data is Olson timezone database
 - Included in Linux, AIX and Solaris
 - We ship for Windows
- No changes necessary to existing code
 - methods that specify explicit offset are deprecated

Infrastructure – V8.5.2

Time Zone Support

- In 2011, America/New_York DST started Sunday March 13 at 2:00AM
- Example: From noon Saturday March 12, 2011 to noon Sunday March 13, 2011 is a 23 hour day:

```
date1 := DateAndTime year: 2011 month: 3 day: 12 hour: 12 minute: 0
second: 0.
```

```
date2 := DateAndTime year: 2011 month: 3 day: 13 hour: 12 minute: 0
second: 0.
```

```
date2 - date1 --> 0:23:0:0.0
```

- Example: Time in two US time zones close to the DST transition:

```
date1 := DateAndTime year: 2011 month: 3 day: 12 hour: 23 minute: 30
second: 0 timeZone: 'America/Los_Angeles'.
```

```
date2 := date1 transformToTimeZoneNamed: 'America/New_York'.
```

```
date1 --> 2011-03-12T11:30:00-08:00 "PST"
```

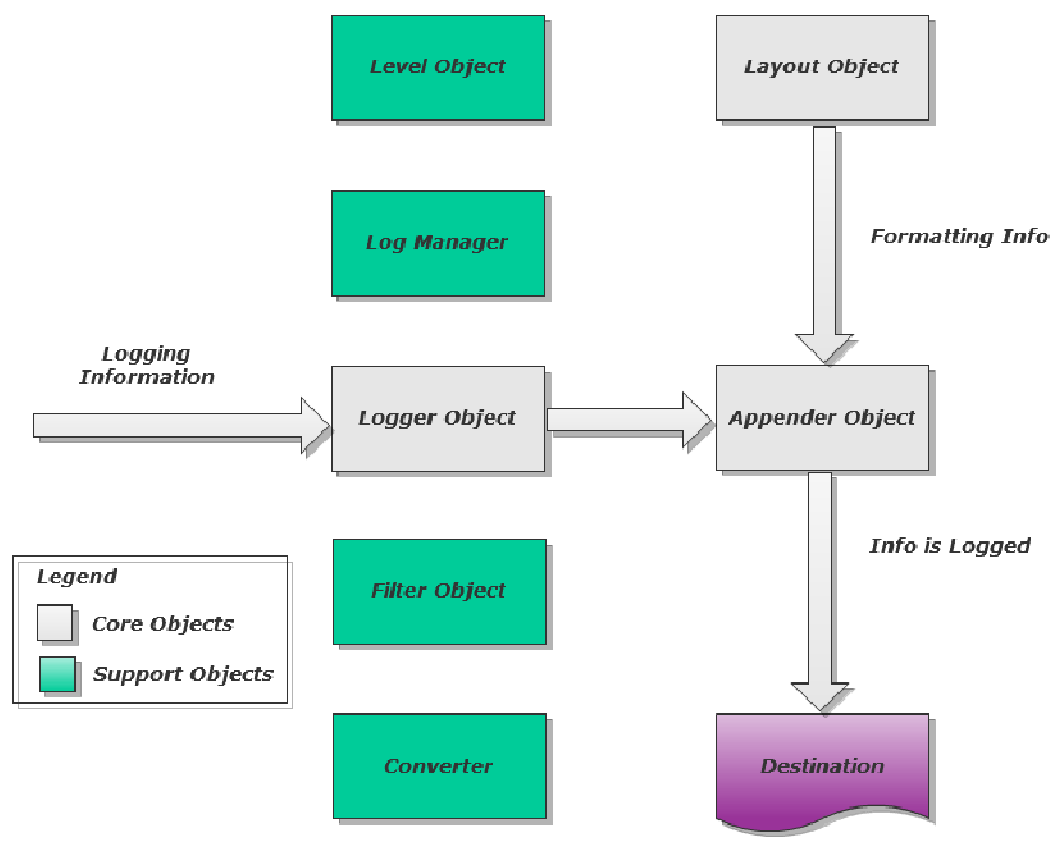
```
date2 --> 2011-03-13T03:30:00-04:00 "EDT"
```

Infrastructure

Logging Framework

- **Problem:** The product currently contains many ad-hoc logging solutions, but no centralized facility useable by product developers and customers.
- **Solution:** Provide a Logging Framework to standardize the definition, use, and output formatting of logs.

Infrastructure Logging Framework



- Log4s is based on ideas from the popular Java logging framework *log4j*
- Designed to be extended
- Configurable through .INI file

Infrastructure – V8.5.1

Logging Framework Enhancements

- Async appender
 - Logging request is queued for background processing
- Add block parameters for performance
 - Content not executed if logging request is filtered out
- Add SocketAppender retry count
 - Recover from transient connection problems

Infrastructure

Preference Settings Framework

- **Problem:** Existing customization preference settings are not well-managed or well-documented. In some cases, they are completely hidden.
- **Solution:** Provide a Preference Settings Framework to standardize the management and documentation of preferences.

Infrastructure – V8.5.1

Preference Settings Framework Enhancements

- *validSettings*
 - Array values can be non-homogeneous
 - Homogeneous/non-homogeneous based on Array size
 - Example

```
validSettings
^ LookupTable new
  at: self symbol asString
  put: (LookupTable with: 'fooBar' -> (Array
    with: self numberType
    with: self numberType
    with: self stringType));
yourself
```

Infrastructure – V8.5.1

Logical -> Physical DLL/SO Name Mapping

- **Problem:** The physical names of .DLL or .SO files used to supply external function can change based on platform and release level. Hardcoding the physical name in the image causes fragility.
- **Solution:** Map a logical name to a physical name outside the image using the .INI file.

```
[PlatformLibrary Name Mappings]  
logicalName1=physicalName1  
...  
logicalNamen=physicalNamen
```

Graphics and Windowing

Rebar Control

- **Problem:** Windows customers want Toolbars with adjustable content.
- **Solution:** Add support for Rebar Windows Control



Graphics and Windowing – V8.5.2

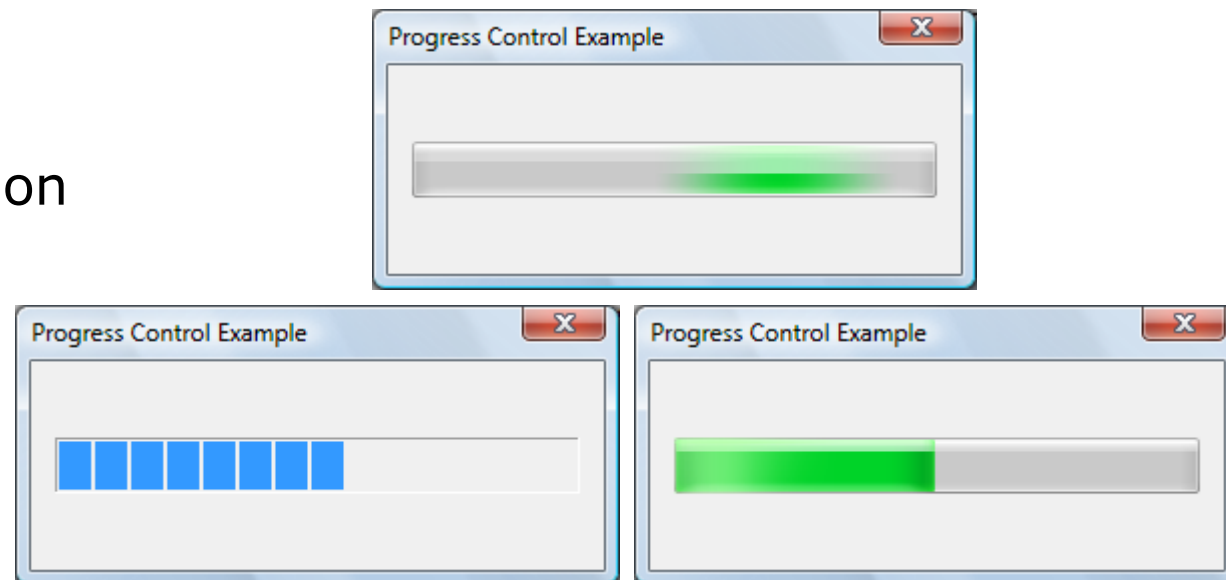
Rebar Control

- Supported in Composition Editor

Graphics and Windowing – V8.5.1

ProgressBar Improvements

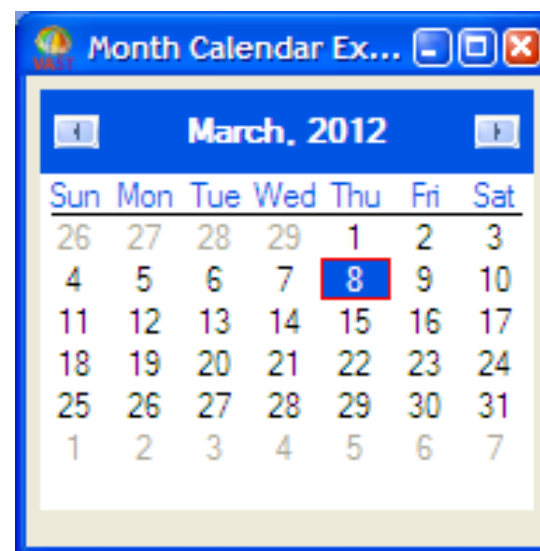
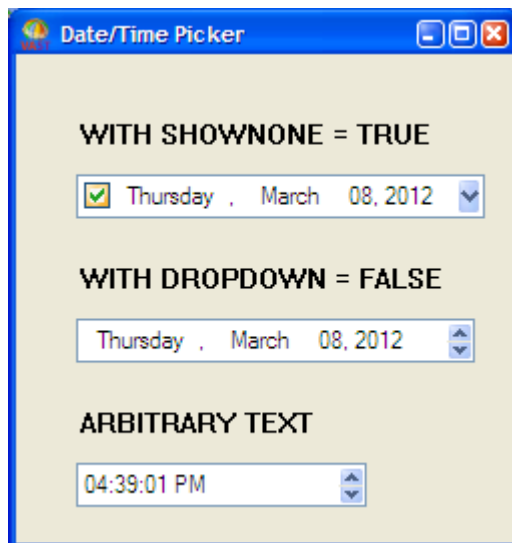
- **Problem:** Windows ProgressBar Control has been enhanced, but VA Smalltalk support missing
- **Solution:** Update VA Smalltalk support for the ProgressBar
 - Marquee
 - Smooth
 - Orientation
 - State



Graphics and Windowing – V8.5.1

Date And Time Controls

- **Problem:** No user interface supplied supporting enter/display time and date.
- **Solution:** Add support for Date and Time Picker and Month Calendar Windows Controls



Web Interface – V8.5.1

Seaside 3.0.6+ / Grease 1.0.6+

- **Problem:** Seaside and Grease development has progressed since VA Smalltalk V8.5
- **Solution:** Port Seaside 3.0.6 and Grease 1.0.6 (both with updates through 1/31/2012 – exact level identified in configuration maps)

Documentation - V8.5.2

- On-line documentation and FAQs enabled for Google search
- New "Videos and Podcasts" page on website
 - http://www.instantiations.com/resources/st4u_videos.html

Miscellaneous – V8.5.1

- Performance and Scalability
 - SST Lightweight Marshaling improvements
- Middleware
 - GLORP upgrade (0.3.182+)
- Platforms
 - Fedora Core 16
 - OpenSUSE 12.1
 - Ubuntu 11

Miscellaneous – V8.5.2

- Development Tools
 - VA Assist browser performance improved when accessing repository with high network latency
 - Packaging instructions for Seaside ICs
 - *Tools -> Query -> Globals in Unmanaged Namespace*
- Middleware
 - GLORP upgrade (0.4.190)
- Infrastructure
 - `System>>getProcessId` added
 - Seaside ICs
 - Core
 - Javascript/jQuery/Scriptaculous
 - Runtime Tools

Miscellaneous – V8.5.2

- Web services

- SstWSContainer

`class>>resetWebServicesDevelopmentEnvironment` added to
cleanup when debugging

- Platforms

- Windows 8
- Ubuntu 12

Support

- 60+ bug fixes & minor enhancements in V8.5.1
- 55+ bug fixes & minor enhancements in V8.5.2

Looking to the Future

Future Releases

- Release schedule is about twice a year
 - Next release is planned for 3Q/2013
 - Current information available in Product Roadmap
 - <http://www.instantiations.com/products/roadmap.html>
- Content based on requirements from:
 - Direct customer interactions
 - Forums
 - Support cases
 - Internals

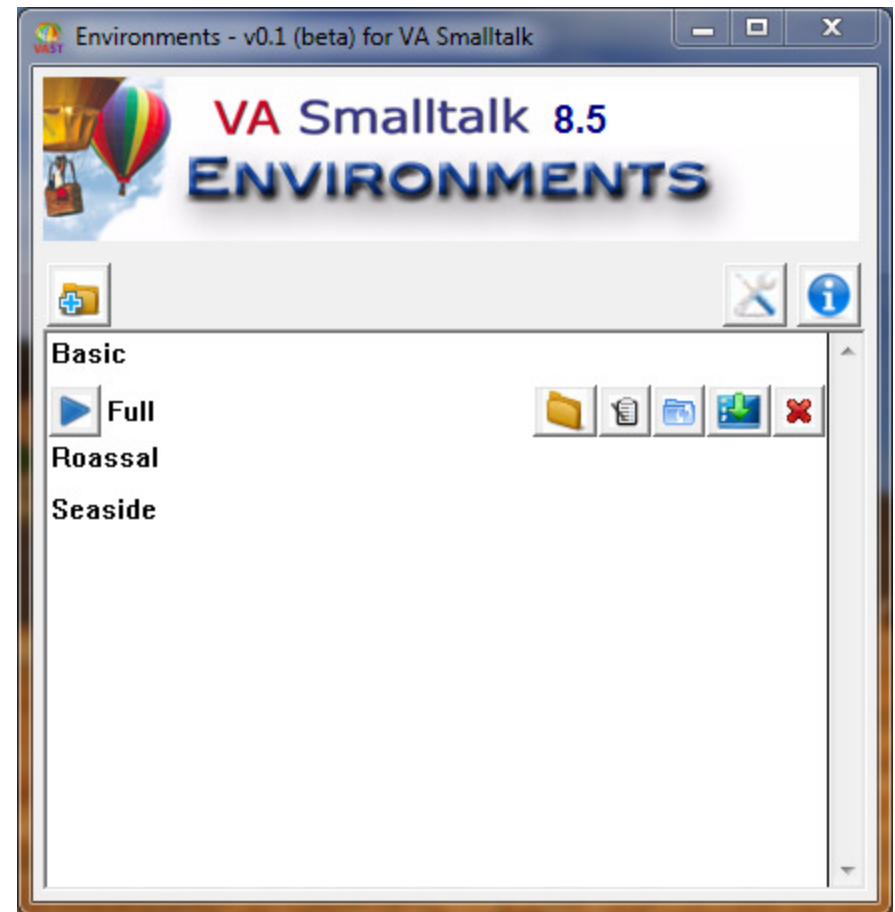
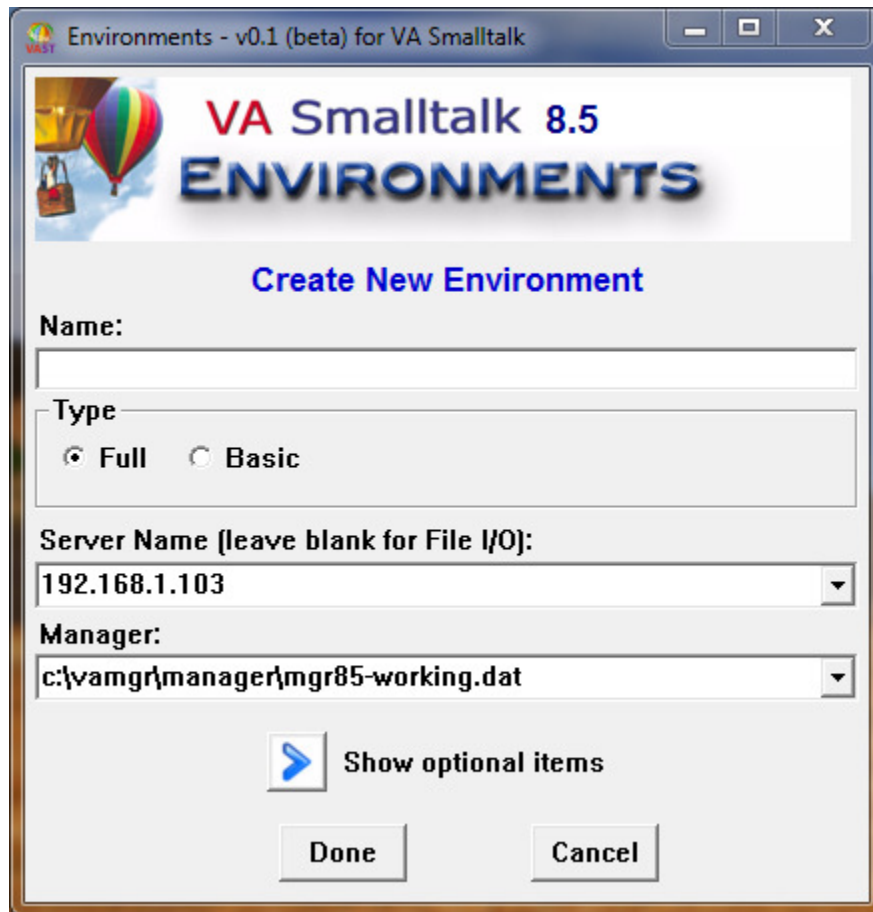
V8.6 Planned Content

- Development Tools
 - GLORP XD Future
 - Seaside XD Feature
- Middleware
 - GLORP currency (7.x) including HostVar support
- GUI Look and Feel
 - Windows Common Controls improvements
- Web Interface
 - Grease 1.1 / Seaside 3.1
 - SST Servlet multipart forms
- ... and a few surprises

Windows Installer for V8.6 Beta

- Single installer for code (Client and Manager)
- Separate installer for documentation (content same as on-line)
- Built with InstallShield
- Respects Windows User Access Control (UAC) rules
- Includes the new Environments tool for all customization
- Includes development build of V8.6 with a small number of fixes
- Available for download in late November 2012

Environment Tool Example



Priority Technologies

- Internationalization
- Web interface
- Middleware
- GUI Look and Feel
- Development Tools
- Security
- Performance and Scalability
- Platforms
- External Interfaces
- Other

Future Releases

Candidate Items

- Internationalization
 - **Full Unicode/UTF-8 (including VM)**
- Web interface
 - Seaside 3.x
 - **Continuation support**
 - Web services tooling improvements
 - Web services debugging tools/doc
 - Validating XML parser

Future Releases

Candidate Items

- GUI Look-and-Feel
 - **GTK+ 3.x on Linux**
 - Windows Common Controls additions
 - **Icon/image support enhancements**
 - Support for alpha-channel (blending)
 - Support for .PNG file (R/W)
 - Back-port widgets from add-ons
- Development Tools
 - Redesigned Change Browser & Merge Tool

Future Releases

Candidate Items

- Infrastructure
 - Settings Dialogs to complement Settings Framework
 - Consolidate more settings using Settings Framework
 - Consolidate product logging using Logging Framework
 - **Full .zip, .gz, and inflate/deflate support**
- Middleware
 - DB2 Stored Procedures improvements
 - GLORP Programmer's Reference
 - Active Records built on GLORP
 - **'Simple' DB support (MySQL or SQLite)**
 - MQ currency
 - **TCP/IP V6**

Future Releases

Candidate Items

- Security
 - 'Basic' security framework (consolidate existing OpenSSL wrappers)
 - **'Full' security framework -- OpenSSL 1.0 wrappers**
- Performance and Scalability
 - **Incremental garbage collection**
 - **64-bit Smalltalk**
 - Class library performance hotspots
 - Integrate KES/Stats goodie for object monitoring
- Platform
 - Windows Services control moved from C to Smalltalk

Future Releases

Candidate Items

- External Interfaces
 - JNIport (currently available on VASGoodies.com)
 - .NET/C#
 - Other
- Class Libraries
 - Collection hashing policies
 - Sorted collection sorting policies
- Other
 - *We're always looking for suggestions*

How Do You Get VA Smalltalk?

- Download evaluation copy
 - <http://www.instantiations.com/products/vasmalltalk/download.html>
- Buy development licenses
 - <http://www.instantiations.com/products/purchase.html>
- Download development build
 - Announced in VA Smalltalk Google Group
- Be a committer on an Open Source project
 - <http://www.instantiations.com/company/open-source.html>
- Work for an educational institution
 - <http://www.instantiations.com/products/academic-license-program.html>

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