## Pushing the VA Smalltalk Editor Onward and Upward

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# VAST 8.6 (current release)

#### Goals

- Modernize the editor
- Maintain compatibility with legacy editor
- Custom scanner used for both syntax coloring and source analysis
- A few new visual effects if time permits



# VAST 8.6.1 (future release)

### Goals

- Performance Improvements/Memory Reduction
- Editor Themes
- Real-time Code Analytics
- Interactive Refactoring
  - (Near) Context-switchless workflow using visual effects for feedback and conflict detection



# Performance Improvements Memory Reduction

- Direct-Communication
  - Bypass Windows Message Queue in favor of platform function call
  - Up to 25x performance increase during intense communications
- Direct-Access API
  - The text buffer of the internal editor is used directly to avoid copying data into Smalltalk
  - Useful for algorithms requiring read-only access to large portions of the text content (i.e. parse-tree input, text search)
- Huge memory reduction



### **Editor Theme**

```
_ D X
Editor Theme
File Editor Theme
Theme:
Default
                                                                           Save As...
                                                                                        Reset
                                                                          Style:
Smart Highlight (Selected)
                                                                          Sample Text
                                                               Fore Color
                                                                              Transparency
       scSampleMethod: arg1 with: arg2
                                                                             Alpha
                                                                    G
  2
                "This is a multi-line comment
  3
                  This is a multi-line comment"
                                                     △ ▼ Call
                                                                             Outline Alpha
                                                     Item
  6
                temp1 temp3
                                                    Highligh
                                                                255 165 0
                                                                                    59%
                ferimitive: ThisIsAPrimitive>
                temp1 := Array with: arg1 with: instVar1 wi
                                                                  #FFA500
                "Another comment"
                self activeBreakpoint.
                                                               Indicator Style
               self inactiveBreakpoint.
                                                               Name: StraightBox
                self mixed: [self activeBreakpoint] with:
                self disabledBreakpoint.
                                                               Draw underneath text
                1 to: temp1 size do: [:blockArg | | temp2
                        (temp3 := temp2 := temp1 at: block/
                                                               Apply Cancel
                                                                                        Default
                                 setSensitive: true;
                                 setLabel: CwConstants::XmOK;
 18
                                 backgroundColor: (Color blue: 65535 // 2 + 1);
 19
                                 smartHighlight;
 20
                                 smartHighlight;
                                 addAll: #(#A #B 3);
 22
                                 propertyAt: false put: #[1 2 3 4].
                        self callCallbacks: temp2 callData: instVar2].
 24
                self
                        propertyAt: $A;
 26
                        propertyAt: 'aString' put: nil.
                temp1 recomputeSize.
 28
                ^super sampleMethod: arg1 with: temp1))))))]
```



## **Bracket Matching**

- Uses indicator underlays as default styling
- Margin marker used to indicate offscreen matches



## **Comment Folding**

- Auto-Collapse
  - All comments
  - First comment
  - First method comment
- Folding Threshold
  - User can specify then number of lines in a comment before folding is considered



## **Code Analytics**

- Demo
  - Lint Analysis
  - Type Analysis
  - Interactive Refactoring
  - Action List Calltips



### **Code Completion**

- Auto-Insert arguments for calls to 'super' with same selector
- Define Accessors

