Cascade Server User Conference

Code Handout

Handout and PowerPoint slide show are available at
http://www.cascadeexperts.com or http://www.stoneridge.net

Example #1:

```
#set($string = 'Mary had a little lamb, its fleece as white as snow.')
$string.concat(' And everywhere that Mary went, the lamb was sure to go.')
```

Example #2:

```
#macro(call $method)#if($method)#**##end#end
#set($string = 'Mary had a little lamb, its fleece as white as snow.')
#call($string.concat(' And everywhere that Mary went, the lamb was sure to go.'))
```

Example #3:

```
#macro( addGACodeToLinks $JDOMobject $GAcategory $GAfunction $GAlabel )
#set($nodeSet = $_XPathTool.selectNodes($JDOMobject, '//a'))
#set($globalLabel = $GAlabel)
#foreach($node in $nodeSet)
	#set($linkValue = $node.getText().replaceAll("'","\\'"))
	#set($label = '')
	#if($node.getAttributeValue('href').indexOf('site://') == 0 ||
$node.getAttributeValue('href').indexOf('/') == 0)
		#set($label = "${globalLabel}-Internal-Page-${linkValue}-[system
asset]${node.getAttributeValue('href')}[/system-asset]")
	#elseif($node.getAttributeValue('href').charAt(0) == '#')
		#set($label = "${globalLabel}-Page-Nav-${linkValue}")
	#else
		#set($label = "${globalLabel}-Other-${linkValue}-${node.getAttributeValue('href')}")
	#end
#call($node.setAttribute("onClick","_gaq.push(['_trackEvent', '$GAcategory', '$GAfunction',
'${label}']);"))
#end
#end
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

Example #4:

Page Template:

```
<!DOCTYPE html>
<html>
	<head>
		<title>Color Calculator</title>
	</head>
	<body>
		<system-region nam=”DEFAULT” />
	</body>
</html>
```

Data Definition:

```
<system-data-structure>
	<text identifier="hex"
		label="Hex Color"
		regular-expression="/^[0-9a-f]{6}/i"
		input-data-format="Hex color eg. FFFFFF"
		maxlength="6"
		size="6"/>
	<text identifier="hue" label="Hue Change"/>
	<text identifier="sat" label="Saturation Change"/>
	<text identifier="lum" label="Luminosity Change"/>
</system-data-structure>
```

Velocity Script:

```
#macro(calculatedHSL $hexString $hue $sat $lum)##
#set($redString = $hexString.substring(0,2))##
#set($greenString = $hexString.substring(2,4))##
#set($blueString = $hexString.substring(4))##
##
#set($zeroString = "")##
#set($zeroString = "0")##
##
#set($redNum = 0)##
#set($greenNum = 0)##
#set($blueNum = 0)##
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

```
##
#set($redNum = $redNum.parseInt($redString, 16))##
#set($greenNum = $greenNum.parseInt($greenString,16))##
#set($blueNum = $blueNum.parseInt($blueString,16))##
#set($hueDegree = $_MathTool.toInteger($hue))##
#set($hueChange = $hueDegree/360.0)##
#set($satPercent = $_MathTool.toInteger($sat))##
#set($satChange = $satPercent/100.0)##
#set($lumPercent = $_MathTool.toInteger($lum))##
#set($lumChange = $lumPercent/100.0)##
##RGB TO HSL
#set($var_R = ( $redNum / 255.0 ))##
#set($var_G = ( $greenNum / 255.0 ))##
#set($var_B = ( $blueNum / 255.0 ))##
##
#set($var_Min = $_MathTool.min($var_R, $var_G, $var_B ))##
#set($var_Max = $_MathTool.max($var_R, $var_G, $var_B ))##
#set($del_Max = $var_Max - $var_Min)##
##
#set($L = ($var_Max + $var_Min)/2.0)##
##
#if($del_Max == 0.0)##
#set($H = 0.0)##
#set($S = 0.0)##
#else
##
#if($L < 0.5 )##
#set($S = $del_Max/($var_Max + $var_Min))##
#else##
#set($S = $del_Max/(2.0 - $var_Max - $var_Min))##
#end##
##
#set($del_R = ( ( ($var_Max - $var_R ) / 6.0 ) + ($del_Max / 2.0 ) ) / $del_Max)##
#set($del_G = ( ( ($var_Max - $var_G ) / 6.0 ) + ($del_Max / 2.0 ) ) / $del_Max)##
#set($del_B = ( ( ($var_Max - $var_B ) / 6.0 ) + ($del_Max / 2.0 ) ) / $del_Max)##
##
#if( $var_R == $var_Max )##
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

```
#set($H = $del_B - $del_G)##
#elseif ( $var_G == $var_Max )##
#set($H = ( 1.0 / 3.0 ) + $del_R - $del_B)##
#elseif ( $var_B == $var_Max )##
#set($H = ( 2.0 / 3.0 ) + $del_G - $del_R)##
#end##
##
#if ($H < 0.0 )##
#set($H = $H + 1.0)##
#end##
##
#if ($H > 1.0 )##
#set($H = $H - 1.0)##
#end##
##
#end##
##
##Change values HSL
##
#set($H = $H + $hueChange)##
##
#if($H > 1.0)##
#set($H = $H - 1.0)##
#end##
#if($H < 0.0)##
#set($H = $H  + 1.0)##
#end##
##
##
#set($S = $S + ($S * $satChange))##
##
#if($S >= 1.0)##
#set($S = 1.0)##
#end##
#if($S <= 0.0)##
#set($S = 0.0)##
#end##
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

```
##
##
#set($L = $L + ($L * $lumChange))##
##
#if($L >= 1.0)##
#set($L = 1.0)##
#end##
#if($L <= 0.0)##
#set($L = 0.0)##
#end##
##
##
##HSL TO RGB
##
#if($L == 1.0)##
#set($redNum = 255.0)##
#set($greenNum = 255.0)##
#set($blueNum = 255.0)##
##
#elseif($S == 0.0)##
#set($redNum = $L * 255.0)##
#set($greenNum = $L * 255.0)##
#set($blueNum = $L * 255.0)##
##
#else##
##
#if( $L < 0.5 )##
#set($var_2 = $L * ( 1.0 + $S ))##
#else##
#set($var_2 = ( $L + $S ) - ( $S * $L ))##
#end##
##
#set($var_1 = 2.0 * $L - $var_2)##
##
#set($RvH = $H + ( 1.0 / 3.0 ))##
#if($RvH < 0.0)##
#set($RvH = $RvH + 1.0)##
```


Bryce Roberts
Bryce@stoneridge.net

```
#elseif($RvH > 1.0)##
#set($RvH = $RvH - 1.0)##
#end##
##
#if((6.0 * $RvH) < 1.0)##
#set($redVal = $var_1 + ( $var_2 - $var_1 ) * 6 * $RvH )##
#elseif (( 2.0 * $RvH ) < 1.0 )##
#set($redVal = $var_2 )##
#elseif (( 3.0 * $RvH ) < 2.0 )##
#set($redVal = $var_1 + ( $var_2 - $var_1 ) * ( ( 2.0 / 3.0 ) - $RvH ) * 6.0 )##
#else##
#set($redVal = $var_1 )##
#end##
##
#set($GvH = $H )##
#if($GvH < 0.0)##
#set($GvH = $GvH + 1.0)##
#elseif($GvH > 1.0)##
#set($GvH = $GvH - 1.0)##
#end##
##
#if ( (6.0 * $GvH) < 1.0 )##
#set($greenVal = $var_1 + ( $var_2 - $var_1 ) * 6 * $GvH )##
#elseif (( 2.0 * $GvH ) < 1.0 )##
#set($greenVal = $var_2 )##
#elseif (( 3.0 * $GvH ) < 2.0 )##
#set($greenVal = $var_1 + ($var_2 - $var_1) * (( 2.0 / 3.0 ) - $GvH ) * 6.0)##
#else##
#set($greenVal = $var_1 )##
#end##
##
#set($BvH = $H - ( 1.0 / 3.0 ))##
#if($BvH < 0.0)##
#set($BvH = $BvH + 1.0)##
#elseif($BvH > 1.0)##
#set($BvH = $BvH - 1.0)##
#end##
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

```
##
#if ((6.0 * $BvH) < 1.0 )##
#set($blueVal = $var_1 + ($var_2 - $var_1) * 6 * $BvH )##
#elseif (( 2.0 * $BvH ) < 1.0 )##
#set($blueVal = $var_2 )##
#elseif (( 3.0 * $BvH ) < 2.0 )##
#set($blueVal = $var_1 + ( $var_2 - $var_1 ) * (( 2.0 / 3.0 ) - $BvH ) * 6.0)##
#else##
#set($blueVal = $var_1 )##
#end##
##
#set($redNum = $redVal * 255.0)##
#set($greenNum = $greenVal * 255.0)##
#set($blueNum = $blueVal * 255.0)##
##
#end##
##
##
#if($redNum > 255)##
#set($redNum = 255)##
#end##
#if($greenNum > 255)##
#set($greenNum = 255)##
#end##
#if($blueNum > 255)##
#set($blueNum = 255)##
#end##
##
#if(($redNum - $redNum.intValue())<0.5)##
#set($redString = $redNum.intValue().toHexString($redNum.intValue()).toUpperCase())##
#else##
#set($redNum = $redNum.intValue() + 1)##
#set($redString = $redNum.toHexString($redNum.intValue()).toUpperCase())##
#end##
#if(($greenNum - $greenNum.intValue())<0.5)##
#set($greenString = $greenNum.intValue().toHexString($greenNum.intValue()).toUpperCase())##
#else##
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

```
#set($greenNum = $greenNum.intValue() + 1)##
#set($greenString = $greenNum.toHexString($greenNum.intValue()).toUpperCase())##
#end##
#if(($blueNum - $blueNum.intValue())<0.5)##
#set($blueString = $blueNum.intValue().toHexString($blueNum.intValue()).toUpperCase())##
#else##
#set($blueNum = $blueNum.intValue() + 1)##
#set($blueString = $blueNum.toHexString($blueNum.intValue()).toUpperCase())##
#end##
##
#if($redString.length() == 1)##
#set($redString = "${zeroString}${redString}")##
#end##
##
#if($greenString.length() == 1)##
#set($greenString = "${zeroString}${greenString}")##
#end##
##
#if($blueString.length() == 1)##
#set($blueString = "${zeroString}${blueString}")##
#end##
##
#set($c = "${redString}${greenString}${blueString}")##
$c##
##
#end

#set($hexInput = "FEDCBA")
#set($hueInput = '0')
#set($satInput = '0')
#set($lumInput = '0')
#set($hexInput = $_XPathTool.selectSingleNode($contentRoot,"//hex").text)
#set($hueInput = $_XPathTool.selectSingleNode($contentRoot,"//hue").text)
#set($satInput = $_XPathTool.selectSingleNode($contentRoot,"//sat").text)
#set($lumInput = $_XPathTool.selectSingleNode($contentRoot,"//lum").text)
#set($calColor = "#calculatedHSL($hexInput $hueInput $satInput $lumInput)")
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net

```
<style>
.container{margin:30px; border:2px solid #000000;padding:10px;}
.container div{margin:10px;}
</style>

<div class="contianer">
<h1>Calculated Color Schemes</h1>
<div class="contianer">
   <h2>Base and Calculated Colors</h2>
   <div style="background-color:${_EscapeTool.h}${hexInput}">Base Color</div>
   <div style="background-color:${_EscapeTool.h}${calColor}">Calculated Color</div>
</div>
</div>
```


STONERIDGE CORPORATION
Educational Research Solutions
The Power to Understand
CASCADE EXPERTS
Bryce Roberts
Bryce@stoneridge.net