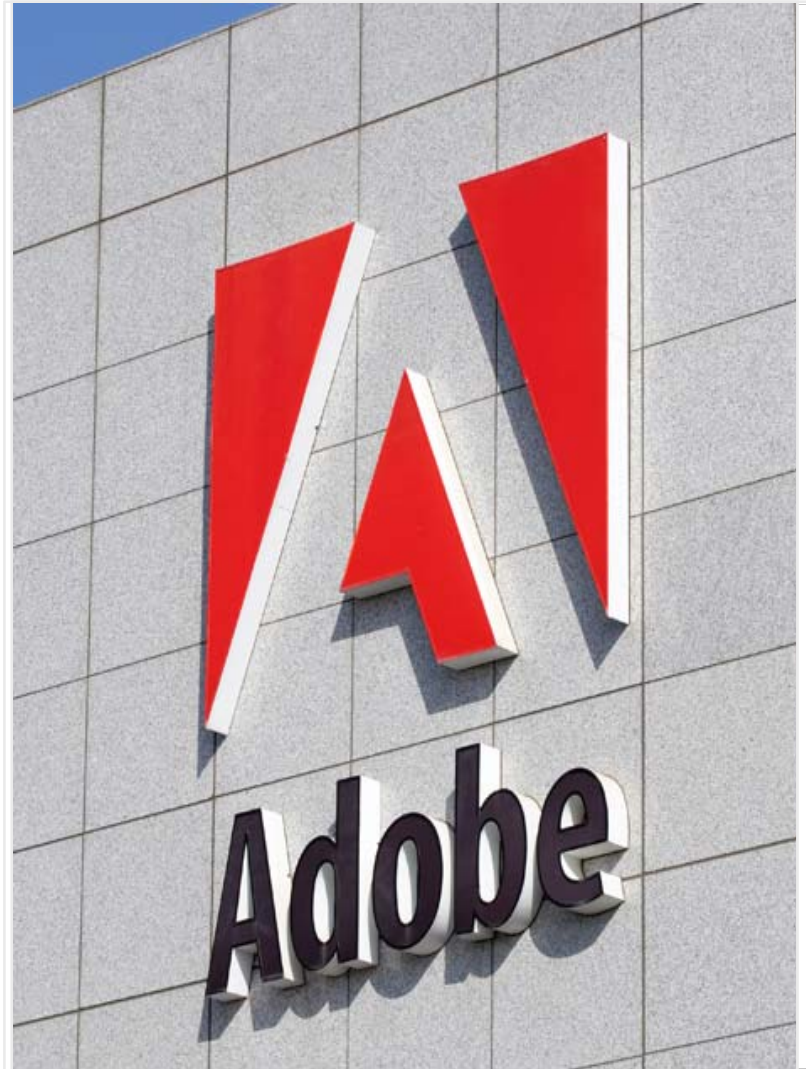# Advanced Scripting in Photoshop

Tom Ruark

Photoshop Engineering

April 2008

Setting up Photoshop

- Reset with "the claw" (Shift-Ctrl-Alt)

- Install ScriptListener plug-in

    C:\Program Files (x86)\Adobe\Adobe Photoshop CS3\Scripting Guide\Utilities

- Desktop files ScriptListenerJS.log

- Focus on JavaScript (cross-platform)

Adobe

Overview of Extend Script Tool Kit (ESTK)

- JavaScript documentation

- JavaScript source file editor (syntax highlighting, code folding and code complete)

- Presets for favorite folder(s)

- More examples in Bridge SDK

  http://www.adobe.com/devnet/bridge/

ESTK modify some more

- Change font to Monospace

- Remove annoying dialogs

    - Reload it? 80document.jsx

    - Search from top? 85findReplaceDialog.jsx

- Add Photoshop documents to Help --> SDK menu

- Run scripts from ~/User/Documents/Adobe Scripts to avoid annoying "do you want to run" dialog

- Watch out for the drop down in ESTK

Photoshop document object model (DOM)

- Diagram in Photoshop CS3 Scripting Guide

- Application is not needed as a reference

  app.activeDucument == activeDocument

- "Active" items   (activeDocument, activeLayer)

- Collections   (documents, layers, channels)

- Case sensitive not strongly typed language

- Drag and drop JavaScript files onto Photoshop

Adobe

- ## layers

    all things in hierarchy form includes groups and layers

- ## artLayers

    Text layers, pixel layers, adjustment layers, everything BUT group

- ## layerSets

    Layer groups, we used to call them sets

UnitValue   friend or foe

documents.add(1000, 1000);

----

app.preferences.rulerUnits = Units.PIXELS;

documents.add(1000, 1000);

----

app.preferences.rulerUnits = Units.INCHES;

documents.add(UnitValue(1000, "px"), UnitValue(1000, "px"));

Try catch and reporting errors

```
app.preferences.rulerUnits = Units.INCHES;

documents.add(1000, 1000);

-----------------------------------------------------

try {

  app.preferences.rulerUnits = Units.PIXELS;

  documents.add( 1000, 1000 );

}

catch(e) {

  alert(e + ":" + e.line);

}
```
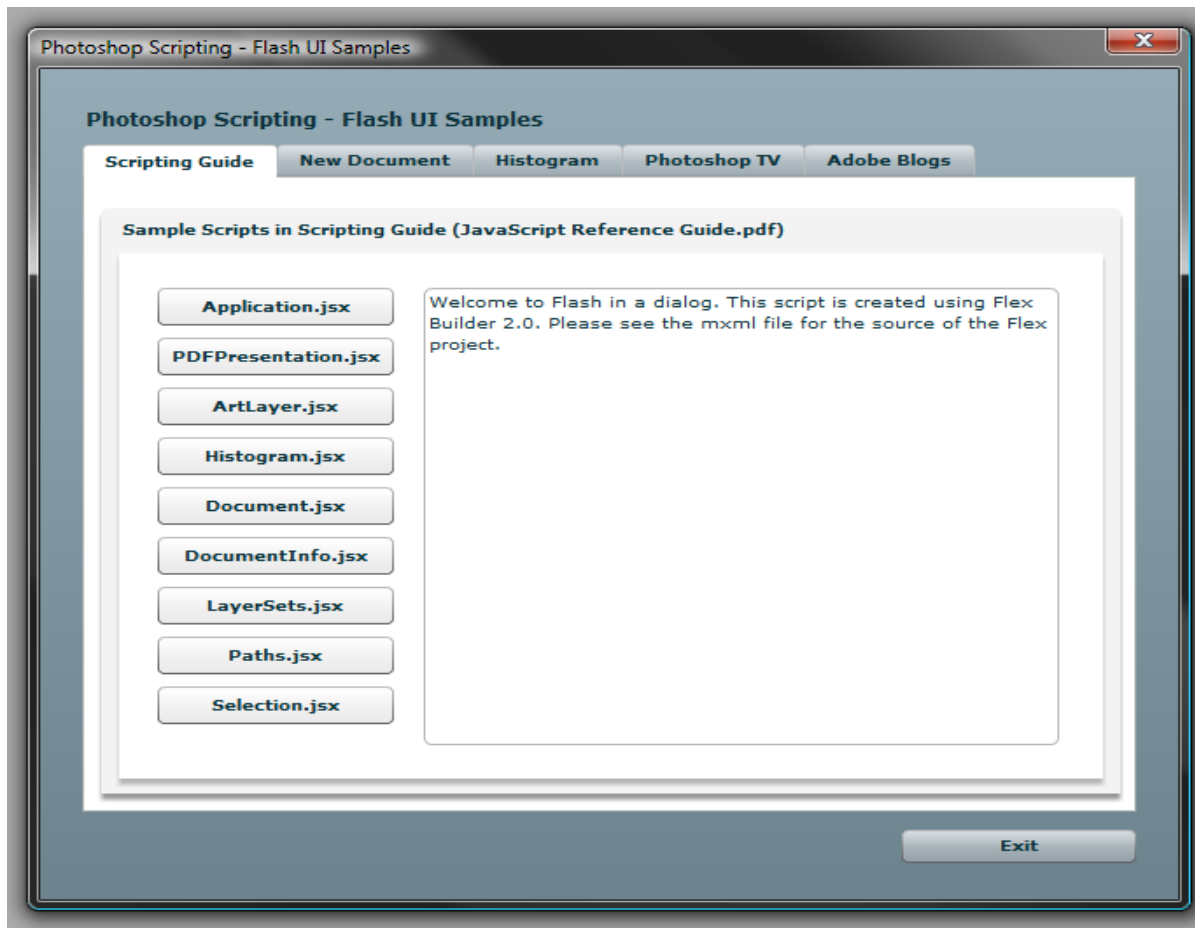
Adobe

Debugging fun

- app.reflect.properties

- app.reflect.methods

- (object).reflect

ScriptUI

- ScriptUI.jsx

Flash UI

C:\...\Adobe Photoshop CS3\Scripting Guide\Sample Scripts\JavaScript\FlashUISample.jsx

JavaScript ⟵⟶ ActionScript (ActionScript)

```
public function callSampleDocument():void {

  var f:String = "sampleDocument";

  var m:String = ExternalInterface.call(f);

  txtLabelTab1.text = m.toString();

  Alert.show(m.toString(), 'Photoshop
    Scripting',mx.controls.Alert.OK);

  }
```

Adobe

JavaScript ←→ ActionScript (JavaScript)

```javascript
var res = "dialog {                                    \
 fp: FlashPlayer { preferredSize: [650, 550] },       \
}";
var w = new Window (res,"Photoshop Scripting - Flash UI Samples");
w.onShow = function () {
        this.fp.loadMovie (new File (mySWFFile));
        this.fp.playMovie ();
        this.fp.sampleDocument = sampleDocument;
}


function sampleDocument() {
 return "The document ( "  + myNewDoc + " ) with two images is created.";
}
```

Bridge and Photoshop

- Add a menu item

- X-DOM

- BridgeTalk

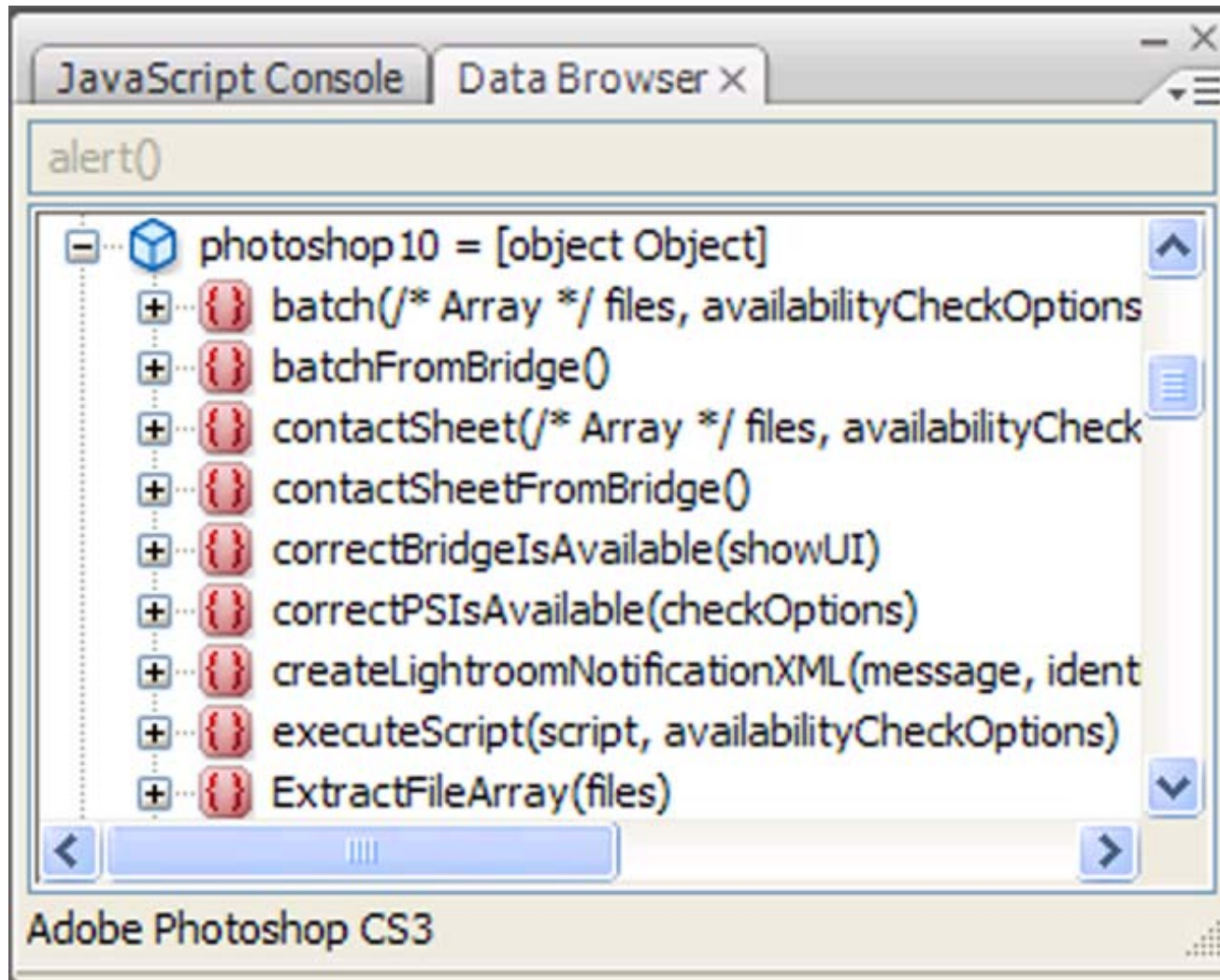# Bridge and Photoshop - Add a menu item

```
drBrownsSubMenu = MenuElement.create ("menu",
                                    "Dr. Brown's Services " + drbrownserv.version,
                                    '-after submenu/VersionCue',
                                    'tools/drbr');


var menuItem = MenuElement.create ( 'command',
                                    menuItemInfo.text,
                                    'at the beginning of tools/drbr',
                                    menuItemInfo.name);


menuItem.onSelect = menuItemInfo.onSelect;              // the routine to run
```

Bridge and Photoshop – X-DOM

Bridge and Photoshop – X-DOM my favorite

```
//-------------------------------------------------------------
// This routine returns the selected files, or if no files are selected,
// all the files.
//-------------------------------------------------------------
```

- photoshop10.getBridgeFileListForAutomateCommand (false)

Bridge and Photoshop – BridgeTalk

What is it? A way to send JavaScript to another Adobe application

Launches application if it is not running

onResult for result information and onError for error information

```
drbrownserv.drBrownsMergeAMatic = function (/* Array */ files) {
  try {
    if (BridgeTalk.appName != "photoshop") {
    // Bring Photoshop to the foreground.
      BridgeTalk.bringToFront ("photoshop");

      // Create a new BridgeTalk message for Photoshop to invoke
      // this command on the other side of the else with the selected files
      var btMessage = new BridgeTalk;
      btMessage.target = "photoshop";
      btMessage.body = "drbrownserv.drBrownsMergeAMatic (" + files.toSource () + ");";
      btMessage.send();
} else { // below is running in Photoshop
 …
}
```

More info

- Adobe User To User Forums   http://www.adobe.com/forums

- Jeff Tranberrey   http://www.tranberry.com/

- PS-Scripts   http://ps-scripts.com/

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