How to Embrace HTML5 in 10.2

Dan Desjardine
Agenda

- Why HTML5
- Upgrading Existing Flash Documents
- Replacing Flash Widgets
- Document vs Dashboard
- Rules for Replicating Flash Widgets in Dashboard
- Developer and Flash
- Questions and Answers
Why HTML5
"Flash was created during the PC era - for PCs and mice... New open standards created in the mobile era, such as HTML5, will win on mobile devices (and PCs too)." – Steve Jobs
“Thoughts on Flash” – 2010
Why HTML5

- Flash is owned by Adobe and has fewer upgrades
- Adobe Flash Player must be installed
- Flash can run slowly on some platforms
- Flash is not supported on iOS
- HTML5 is controlled by a standards committee - World Wide Web Consortium (W3C) and can be developed by several developers.
Why HTML5

- HTML5 is replacing Flash starting with MicroStrategy 10
- Flash Mode, Interactive Mode, and Express Mode have been depreciated in v10.2 and Presentation Mode and Editable Mode are used to run the document
- Export to Flash has been depreciated in v10.2 – unless an existing Flash document prior to v10.2 has been run
Upgrading Existing Flash Documents
Upgrading Existing Flash Documents

• Documents and dashboards built as Flash with Flash-based content will continue to run and work in v10.2

• Flash documents that have “Export to Flash” enabled on an existing document will still be available when changed to Presentation Mode.
Upgrading Existing Flash Documents

- Flash documents created prior to v10.2 will have default Run Mode remain as “Flash (deprecated)” or “Interactive (deprecated)” unless changed to “Presentation Mode” and uncheck the “Flash (deprecated)” or “Interactive (deprecated)” mode.
Upgrading Existing Flash Documents

Demo of upgrading Flash document to Presentation mode
Replacing Flash Widgets
Replacing Flash Widgets

Flash Widgets are still available in v10.2 under the Insert menu. However MicroStrategy strongly encourages users to use HTML5 based alternatives.
## Replacing Flash Widgets

### Suggested alternative DHTML5 Widgets to replace Flash Widgets

<table>
<thead>
<tr>
<th>Flash Widget</th>
<th>DHTML Widget</th>
<th>Conversion Rules and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Selection</td>
<td>Date Selection</td>
<td>Ensure existing widget is enabled to display in DHTML mode.</td>
</tr>
<tr>
<td>Graph Matrix (deprecated)</td>
<td>Graph Matrix</td>
<td>1. Change the widget type to DHTML Graph Matrix.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. On the underlying grid:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Move the attribute used on the X-axis of the graphs to the rows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If necessary, move the attribute used for the column headers in the Graph Matrix to the rows, above the attribute used for the X-axis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary lines and reference lines are not available.</td>
</tr>
<tr>
<td>Heat Map (deprecated)</td>
<td>Heat Map</td>
<td>Change the widget type to Heat Map, under DHTML.</td>
</tr>
<tr>
<td>Map</td>
<td>Map</td>
<td>Ensure the existing widget is enabled to display in DHTML mode.</td>
</tr>
<tr>
<td>Network</td>
<td>Network</td>
<td>Ensure the existing widget is enabled to display in DHTML mode.</td>
</tr>
</tbody>
</table>
Replacing Flash Widgets

Suggested alternative DHTML5 Widgets to replace Flash Widgets

Flash Map widget (left) and same widget in DHTML (right)
## Replacing Flash Widgets

### Rules for replacing Flash Widgets with Graphs

<table>
<thead>
<tr>
<th>Flash Widget</th>
<th>Graph</th>
<th>Conversion Rules and Comments</th>
</tr>
</thead>
</table>
| Funnel                        | Funnel     | - Add a new Funnel graph using these specifications:  
  - **Series**: Add the attribute used for funnel cross-sections.  
  - **Categories**: Add the “Metrics” object.  
  - **Metrics**: Add the metric used to size cross-sections. |
| Interactive Bubble Graph      | Bubble     | - Add a new Bubble graph using these specifications:  
  - **Series**: Add the “Metrics” object.  
  - **Metrics**: Add all three metrics.  
  - To simulate the in-widget attribute slider, add a new selector to your document and choose the Slider DHTML style. Target the new Bubble graph.  
  - You cannot color bubbles by an attribute in a Bubble Graph. |
# Replacing Flash Widgets

## Rules for replacing Flash Widgets with Graphs

<table>
<thead>
<tr>
<th>Flash Widget</th>
<th>Graph</th>
<th>Conversion Rules and Comments</th>
</tr>
</thead>
</table>
| Interactive Stacked Graph | Vertical Area | Add a new Vertical Area graph using these specifications:  
  • **Series**: Add the “Metrics” object.  
  • **Categories**: Add the time attribute.  
  • **Metrics**: Add the metric displayed on the Y-axis on the Interactive Stacked Graph.  
  Set the graph sub-type to Stacked in the Graph toolbar.  
  To simulate the in-widget attribute element checkbox, add a new selector to your document and choose the Check Boxes DHTML Style. Target the new Vertical Area graph. |
| Time Series Slider        | Vertical Area | Add a new Vertical Area graph using these specifications:  
  • **Series**: Add the “Metrics” object.  
  • **Categories**: Add the time attribute.  
  • **Metrics**: Add the metric displayed on the Y-axis on the Time Series Slider.  
  Consider replacing the in-widget time-range selector with a Slider selector. |
# Replacing Flash Widgets

## Recommendations for replacing Flash Widgets with Selectors

<table>
<thead>
<tr>
<th>Flash Widget</th>
<th>Selector</th>
<th>Conversion Rules and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Selection</td>
<td>Calendar</td>
<td>The Calendar selector enables you to choose a date range.</td>
</tr>
<tr>
<td>Fish Eye</td>
<td>Listbox</td>
<td>Consider disabling the option for All and allowing only a single selection.</td>
</tr>
</tbody>
</table>
Replacing Flash Widgets

Demo of replacing a Flash Widget with DHTML5 Widget, replacing a Flash Widget with a graph, and a Flash Widget with a selector.
Document vs Dashboard
Document vs Dashboard

- Dashboard visualizations are built with HTML5 and provide a more modern look and feel than graphs available in documents.
- Documents provide more breadth of visualizations and more powerful design capabilities.
## Document vs Dashboard

There are cases when it may be preferable to rebuild a document using an HTML5 dashboard. The following guidelines should be used when considering to rebuild a document as an HTML5 dashboard:

<table>
<thead>
<tr>
<th>Rebuild as an HTML5 dashboard if:</th>
<th>Don’t rebuild in an HTML5 dashboard if:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visualizations</strong></td>
<td>You need the breadth of visualizations available in documents.</td>
</tr>
</tbody>
</table>
| You want to take advantage of HTML5 visualizations, which have a more modern look and feel. However, HTML5 dashboards have fewer visualizations available out of the box. Dashboards can be considered if the original document uses the following visualization types:  
  - Area  
  - Bar  
  - Bubble Chart  
  - Combo  
  - Grid  
  - Heat Map  
  - Line  
  - Map  
  - Network  
  - Pie | |
| **Layout** | The document layout has overlapping panels. The document is designed to be longer or wider than a single screen. |
| The document layout has no overlapping panels within a page. Also, the document is designed to fit on one screen. | |
| **Design and Maintenance** | Your documents do not need to be modified often. Although documents have more powerful design capabilities than dashboards, you may find that it takes more time to modify a document. This is not an issue if your dashboards do not need to be modified often. |
| Your documents are modified often. Dashboard design workflow is streamlined. If your dashboards constantly need to be modified, then you may find it easier to redesign your document as a dashboard compared to a document. | |
Document vs Dashboard

While dashboards and Desktop do not yet support all the formatting and layout options available in documents, they do enable quick and easy creation of highly polished and interactive dashboards.

Consider using dashboards or Desktop for creating new interactive dashboards from the following scenarios:

- The author has little or no experience and training using MicroStrategy and other BI products, and needs to quickly create new dashboards.
- The dashboard does not require the use of a pixel-perfect layout, info windows, and setting advanced graph and grid formatting properties.
- The dashboard requires the use of custom (D3.js) visualizations. While it is possible to add D3.js visualizations to documents as of 9.4.1, dashboards drastically simplify the process and provide superior integration capabilities.
- The dashboard needs to be shareable for offline interactive consumption. With Desktop, dashboards can be shared as an .mstr file without requiring a connection to a MicroStrategy Server.
Document vs Dashboard

In cases where a new dashboard is authored using dashboards as the starting point but additional functionality from documents is required, the dashboard can be converted to a document. Once converted, each element of the dashboard is displayed as a document control (that is, an object on the document). For example, a Heat Map visualization is displayed as a Heat Map widget, and sheets within a dashboard are displayed as document layouts.
Rules for Replicating Flash Widgets in Dashboards
Rules for Replicating Flash Widgets

- When building a new dashboard, or rebuilding a document to a dashboard, the following rules should be used to replicate the document widgets using dashboard visualizations.
- If rebuilding a document into a dashboard, first create a new dashboard, then add the report or cube used in the original document’s widget to the dashboard. Conversion rules describe where attributes in the original widget’s underlying dataset (report) should be placed in the new dashboard visualization.

<table>
<thead>
<tr>
<th>Flash Widget</th>
<th>HTML5 Dashboard Visualization or Filter</th>
<th>Conversion Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bubble Grid</td>
<td>Bubble</td>
<td>1. Add a Bubble Chart</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Drag the leftmost attribute to Horizontal.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Drag the second attribute to Vertical.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Drag the first metric to Size By.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Drag the second metric to Color By.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Drag all other metrics to Tooltip.</td>
</tr>
<tr>
<td>Date Selection</td>
<td>Filter (Calendar)</td>
<td>1. Add a visualization filter with a Calendar display style.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Drag the date attribute to the filter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Target any visualization.</td>
</tr>
<tr>
<td>Fish Eye</td>
<td>Filter (List Box)</td>
<td>1. Add a visualization filter with a List Box display style.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Drag the attribute to the filter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Target any visualization.</td>
</tr>
</tbody>
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## Rules for Replicating Flash Widgets

<table>
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<tr>
<th>Flash Widget</th>
<th>HTML5 Dashboard Visualization or Filter</th>
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</tr>
</thead>
</table>
| Interactive Bubble Graph     | Bubble Chart with Filter (Slider)      | 1. Add a Bubble Chart.  
2. Drag the leftmost metric to Horizontal.  
3. Drag the second metric to Vertical.  
4. Drag the third metric to Size By.  
5. Drag the attribute second from the left to Break By.  
6. Drag the third attribute from the left to Color By.  

**To simulate the slider selector:**  
1. Add a visualization filter with a Slider display style.  
2. Drag the leftmost attribute to the filter.  
3. Target the new bubble chart. |
| Interactive Stacked Graph    | Area Chart with Filter (Check Box)     | 1. Add an Area Chart.  
2. Drag the leftmost attribute to Horizontal.  
3. Drag the metric to Vertical.  
4. Drag the second attribute to Color By and ensure "Stacked" is selected under Break By.  

**To simulate the check box selector:**  
1. Add a visualization filter with a Check Boxes display style.  
2. Drag the second attribute to the filter.  
3. Target the new area chart. |
## Rules for Replicating Flash Widgets

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</table>
| Heat Map     | Heat Map                               | 1. Add a Heat Map.  
               |                                        | 2. Drag the leftmost attribute to Grouping.  
               |                                        | 3. Drag the second attribute to Grouping, under the first attribute.  
               |                                        | 4. Drag the leftmost metric to Size By.  
               |                                        | 5. Drag the second metric to Color By.  
               |                                        | 6. Edit the threshold on the metric in Color By to match color formatting with the original widget. |
| Map          | Map                                    | 1. Add a Map.  
               |                                        | 2. If latitude/longitude are attribute forms of your mapped attribute, drag the attribute to Geo Attribute, otherwise drag your latitude attribute to Latitude and longitude attribute to Longitude.  
               |                                        | 3. Drag the metric used for thresholds to Color By.  
               |                                        | 4. Use Map properties Map type and Marker type to choose whether the map displays elements as a Marker, Bubble, or Area.  
               |                                        | 5. For bubbles on maps, return to the visualization’s Editor panel and drag the metric used to determine bubble size to Size By. |
| Network      | Network                                | 1. Add a Network visualization.  
               |                                        | 2. Drag the leftmost attribute to From Item.  
               |                                        | 3. Drag the second attribute to To Item.  
               |                                        | 4. Drag the leftmost metric to Edge Size.  
               |                                        | 5. Drag the second metric to Edge Color.  
               |                                        | 6. Drag the third metric to Item Size. |
## Rules for Replicating Flash Widgets

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<th>HTML5 Dashboard Visualization or Filter</th>
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</table>
| Weighted List Viewer | Bar Chart with Grid                     | 1. Add a Bar Graph.  
2. Drag the leftmost metric to Color By.  
3. Drag the second metric to Vertical.  
4. Drag the attribute to Break By.  
5. In the Axis Lines and Labels properties, clear the Show labels and Show axis titles for all axes.  
6. Hide the legend.  
7. Add a Grid to the dashboard.  
8. Drag the attribute to Rows.  
10. Drag all the metrics to Metrics.  
11. Right-click each metric column and select Thresholds. Edit both metrics’ thresholds to match the bar graph. |
## Rules for Replicating Flash Widgets

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</tr>
</thead>
</table>
| Time Series Slider | Area Chart with a second Area Chart as a selector               | 1. Add an Area Graph.  
2. Drag the leftmost attribute to Horizontal.  
3. Drag the leftmost metric to Vertical.  
4. If there is a second metric:  
   • Add the second metric to Vertical.  
   • Change the visualization to a Combo Chart.  
   • Right-click the bars and line, and change their shape to Area or Line as necessary to match the original widget. |

**To simulate using another time series as a time-range selector:**  
1. Duplicate the Area or Combo Chart that you created above.  
2. Use the duplicate visualization as a filter and target the first visualization.  
3. In the Axis Lines and Labels properties, clear Show labels and Show axis titles for all axes.  
4. Hide the legend.  
5. Drag a rectangle over a horizontal range of data to filter the first area graph.
Rules for Replicating Flash Widgets

Example of replicated Flash Widget to HTML5 dashboard

*Flash Time Series Slider widget (left) re-created in an HTML5 dashboard (right)*
Rules for Replicating Flash Widgets

Demo of replicating Time Series Slider Widget in HTML5 dashboard.
Developer and Flash
Developer and Flash

In MicroStrategy v10.2 the majority of the Flash options have been depreciated. Deprecation means that the functionality is still available, but MicroStrategy strongly encourages customers to use HTML5 alternatives.

In cases where customers absolutely need to have a Flash document and the Export to Flash feature these can be enabled using MicroStrategy Developer. The Flash display mode and Export to Flash can be enabled for both existing and new documents.
Questions and Answers
MicroStrategy World 2016