Dashboard Tips, Tricks

& Cheats You Need to Know

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Tip #1
Date Macros

Macros are a feature within iDashboards that allow for dynamic substitution of values. Macros are useful when you would like to indicate a value that changes over time or by context. Types of macros include: value, parameter, user, chart/category and lastly, the date macros. Macro values dynamically change based on circumstance whereas a static value is unable to change based on circumstance. In this tip, we discuss a date macro being used with a filter.

For example, you want to create a chart that will show you data between today and 120 days ago. Well, a date macro will dynamically change based on "Today" offering 120-day rolling a specific period of time relative to today's date and have that date period rolling.
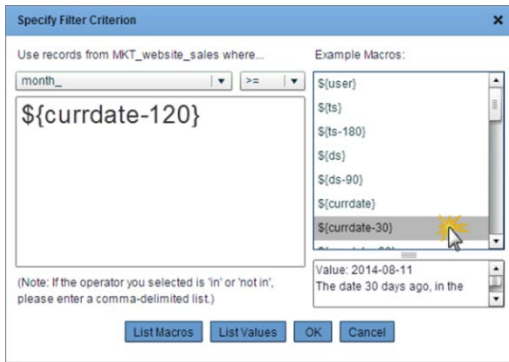
Testing your date format

```
http://www.yourwebserver.com/idashboards/macrotest.jsp
```

Replace with actual URL

Learn More

User's Manual Section: "Using Filter Macros"

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Tip #2
Using SQL in the Filter Dialog

If the data source is configured to allow custom SQL queries, this tip would not be necessary. However, regardless of the data source, any dynamic chart offers the ability to use the built-in dialog to filter data within the iDashboards Chart Designer.

iDashboards offers a basic UI (User Interface) to add filters to any chart.

Specify Data Filters:		
Column	OP	Filter Criterion
STATE_NAME	=	'Colorado'

However, custom SQL can be used within the same filter dialog box to use advanced filtering techniques. Here, the opportunities are endless!

Specify Data Filters:		
Column	OP	Filter Criterion
STATE_NAME	=	${param:state} OR (${param:state} = 'ALL')

```
${param:state} OR (${param:state} = 'ALL')
```

Here we see a filter that will result in showing all the states with 'New' in the name.

Specify Data Filters:		
Column	OP	Filter Criterion
STATE_NAME	<>	'WhateverYouWant' AND [STATE_NAME] LIKE '%'+'New'+'%'

```
'WhateverYouWant' AND [STATE_NAME] LIKE '%'+'New'+'%'
```

## Learn More

OSKAR (http://oskar.idashboards.com)

Tip #3
Dashboard Scaling

Most of the time a dashboard scales larger and smaller without any issues. However, only the graphics scale and not the text. This is to ensure the text maintains a dimensional height for readability across multiple screen sizes. But in the event of 'extreme' scaling, it might be desirable to scale the text. This is common for dashboards built on a computer and displayed on a large LCD monitor. Another purpose for enabling scaling is to ensure a meticulously designed dashboard will display favorably across screens of various dimensions.

Locate the Scaling Options

Within the Dashboard Designer, click the icon shown below.
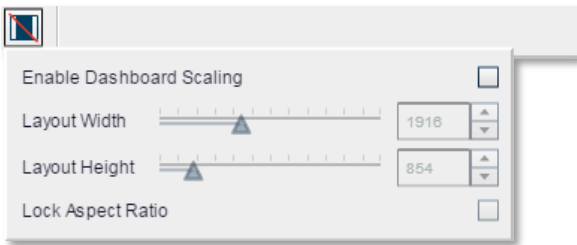
Once Scaling is enabled, the dashboard will use the CURRENT screen size of your dashboard for the dimensions and aspect ratio. Make adjustments as-needed to provide the ideal experience for your end users. Save the dashboard when you're finished and view the dashboard on other screen sizes to see if everything looks great!

Learn More
User's Manual Section: "Dashboard Scaling"

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Tip #4
Using Expressions to Derive Data

Getting a grand total of various Y-Axis values:

```
y1 + y2 + y3
```

Multiple States and you want "Michigan" at the top:

```
if (x=='Michigan') {1}
else {2}
```

Image Plot and you want the point to blink if a threshold is not met:

```
if (y1 < param_goal) {1}
else {null}
```

Image Plot and you want certain points a specific color:

```
if (x=='Detroit') {'#FF0000'}
else if (x=='New York') {'#00BBCE'}
else if (x=='Houston') {'#FDB724'}
else if (x=='Salt Lake City') {'#F27180'}
else if (x=='Los Angeles') {'#87C979'}
else {'#00BBCE'}
```

Preventing a "Divide by Zero Error":

```
if (y1 == 0) {null}
else {(y2-y1)/y1*100}
```

Calculating a "Pass" or "Fail" value when only numbers are in the data:

```
if (y1 >= 70) { 'Pass'}
else {'Fail'}
```

Learn More

User's Manual Section: "Image Plot Tips", "Derived Columns"

Tip #5
Hiding a 'Sorting' Axis

Continuing on the Tip 'Using expressions to derive data', if you plan to use a derived column to help with custom sorting.

Example: Custom sorting on three states:

```
if (x=='Michigan') {1}
else if (x=='Florida') {2}
else if (x=='Texas') {3}
else {4}
```

What happens when the sorting values appear in the chart!

Within the Chart Designer, simply hide the derived column used for sorting!

Specify Chart Axes:

Axis	Name	Data Column	Data Type	Function	Pivot	Hide?
X	State	STATE_ ▾	String			
Y1	Dollars	MARKET_FED... ▾	Number	[None] ▾	▾	☐
Y2	Sorting	(Expression) ▾	Number	▾	▾	☑

Learn More

Learn JavaScript here: http://www.w3schools.com/js/

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Tip #6
Hiding Axes after Totaling

Continuing on the Tip 'Using expressions to derive data', if you plan to use a derived column to help create a grand total.

Example: After using an expression to calculate data from other axes, hide the reference axes and only display the total:

```
y1 + y2 + y3
```

Specify Chart Axes:

Axis	Name	Data Column		Data Type	Function			Pivot	Hide?
X	Employee	EMP	▼	Number					
Y1	Active Calls on Hold	EMP_M1	▼	Number	[None]	▼	▼		☑
Y2	Active Talk Time	EMP_M2	▼	Number	[None]	▼	▼		☑
Y3	Active In-Queue	EMP_M3	▼	Number	[None]	▼	▼		☑
Y4	Total	(Expression)	▼	Number		▼	▼		☐

Specify an Expression for the Selected Axis:

y1 + y2 + y3

▼ Axis Variables

View/Edit Chart Data ✖

Employee	Active Calls o...	Active Talk T...	Active In-Qu...	Total
1084	0	12	0	12
1085	6	0	1	7
1086	0	2	0	2
1087	0	3	0	3
1088	0	6	0	6
1089	0	5	1	6
1090	4	0	2	6
1091	0	5	0	5
1092	12	0	1	13

Tip #7
Providing Instructions on the Dashboard

Generally speaking, the people who view a dashboard are not the same people who participated in building the dashboard. Therefore, think about adding instructions and notes throughout the dashboard to help people understand and navigate through the information.

Dashboard Note

Using either the Text Panel or HTML Text Panel, add some instructions into a frame.
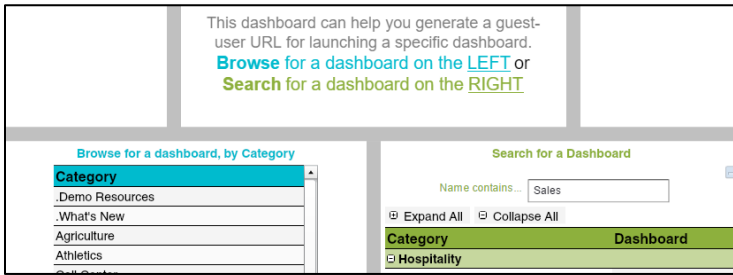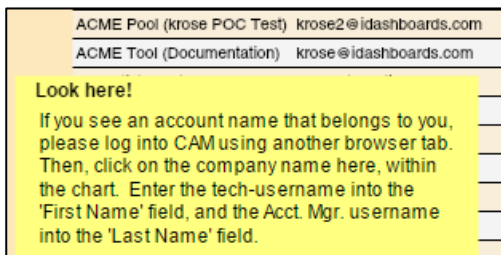

Chart Note

Chart notes are disabled by default. However, you can simply turn on this feature within the Basic Settings and then configure the look of the note. These notes are helpful on drilldown charts too if they say "Click this little button to drill back".
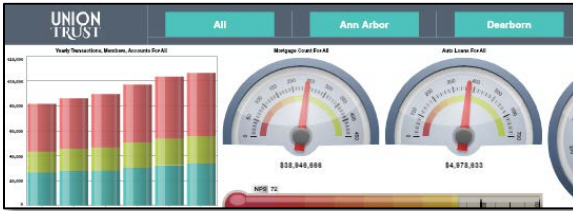

Learn More

User's Manual Sections: "Chart Notes", "Dashboard Panels"

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Tip #8
Making a Rectangle Button

Buttons can be used to change pivots, make a chart appear within a specific frame (via drilldown), or send a value to the dashboard input parameter. This dashboard has buttons along the top (three shown).

First, the majority of buttons can be made with static data, as they normally contain two columns and one row of data.

X-Axis <String> "Branch"	Y1-Axis <Number> "Y"
Ann Arbor	1

Next, use a Treemap chart. Customize the properties like this: Hide Legend, Don't Show Mouse-over Value, Hide Value Label, Range Axis (set to blank), then set the Default Box Color. Of course there are additional properties to define the size, font, etc.

Lastly, configure the Drilldown properties…what is the button going to do when clicked? In this example, the string "Ann Arbor" is sent to the dashboard parameters to filter all of the charts!

This technique is pixel perfect because of the Treemap Chart. A previous way of doing this was with raster images, which looks good, but isn't pixel perfect.

Tip #9
Customizing the User Display Settings

This tip needs to address a few different interfaces. After a successful login, there are User Settings to help you set a customized experience.
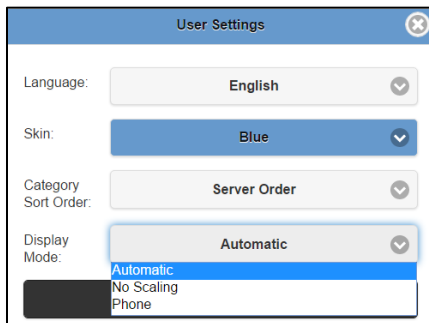
via Browser or Desktop Application

Click the "User Settings" icon. There are many user-specific settings to configure, including the various Dashboard List options and Dashboard Transitions.
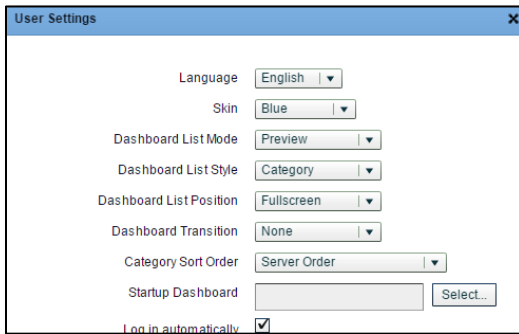
via HTML5

Click the Gear icon, then "User Settings". Here there are fewer settings compared to above, but because HTML5 is mainly for tablets and smaller screens, there is a special Display Mode for "Phones" which will display a single frame at a time!

Tip #10

Avoiding the Adobe Flash Player Plugin

Desktop App

Install the iDashboards Desktop Application to completely avoid the need for a browser and the Adobe Flash Player Plugin. It runs like an application on your computer and offers the entire dashboard building options as the browser.

1. **Adobe AIR**: Offers a consistent environment for out-of-browser applications without needing the Adobe Flash Player plugin. Adobe AIR needs to be downloaded one (1) time and subsequent updates will be automatically guided if the user has an active internet connection. This application needs to be installed first.

   https://get.adobe.com/air/

2. **iDashboards Desktop Application**: This application needs to be installed after installing Adobe AIR. The application needs to be downloaded one (1) time and subsequent updates will be automatically guided if the user has an active internet connection.

   https://update.idashboards.com/desktop/

HTML5

If this is your iDashboards URL:

http://dashmachine:8080/idashboards

...then append "/html5" to get a view-only experience of your dashboards!

http://dashmachine:8080/idashboards/html5

Mobile Apps

http://www.idashboards.com/products/devices/

Tip #11
Embedding a Dashboard

iDashboards can be embedded onto an HTML webpage regardless of the license type (named user or the unlimited viewer/guest user), and regardless of who's hosting the server (iDashboards or you). For years, iDashboards has used 1300x800 for embedding dashboards.

Requirements:

The HTML code and technology you're using must allow for iframes. Height and Width tags will also be necessary to define the dimensions unless advanced CSS is being used.

The iframe Tag:

```
<p>
<iframe src="http://server/idashboards"
width="1300" height="800"></iframe>
</p>
```

The Code (Centered without border):

Try it yourself! Copy this into a text file, edit the URL, then save it as TEST.HTML. Sorry, the style is odd to make sure it can fit on this page.

```
<!DOCTYPE html><html><head>
<title>iDashboards User App</title>
</head>
<body>
<h1 style="text-align: center;">User Application
<span style="font-
size:16px;">&lt;1300x800&gt;</span></h1>
<p style="text-align: center;">
<iframe frameborder="no" width="1300" height="800"
src="http://server/idashboards">
</iframe>
</p>
</body>
</html>
```

Tip #12

Creative Dashboard Layouts

Yes, you can add/remove, split/merge dashboard frames into an infinite number of ways.

Creative Background Images

The image on the **left** was created to be the dashboard background. When dashboard frames were created, they allowed the charts to be positioned within the colorful frames, as shown on the **right**.

Highlighting a Centralized Chart

In this dashboard, the four images each perform a chart-drilldown into the large center frame. This keeps the dashboard focused on a single chart and simplifies the information-delivery process.

Tip #13
Creative Chart Placement

Group Charts Visually

ViFrame charts, placed next to other interactive charts, can appear to be an 'advanced' chart.

Manually Define 'Frame Borders'

Once charts are visually grouped near to one another, it may be helpful to simulate a frame border to surround all of the charts. There are two methods for filling a blank frame with a solid color:

1. Set a dashboard background color - Each unused frame that is 100% transparent will display the background color.
2. Place a text panel - Any frame can host a simple text panel. Don't type any text, but set the background color.
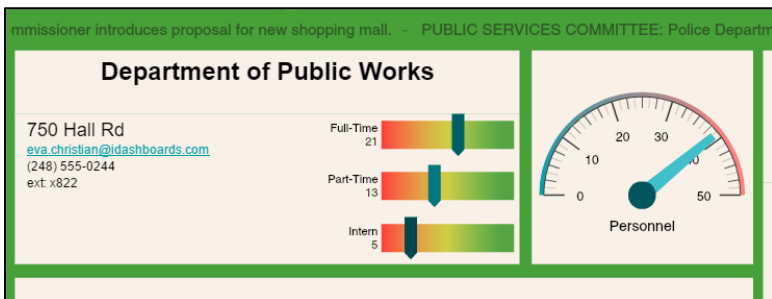

Group Charts by KPI and Functionality

Sometimes a dashboard can appear overwhelming when there are multiple charts and various KPI's to examine. Users find it helpful if charts are grouped by KPI and Functionality. For example, group all Sales-related-charts on the left and all Expense-related-charts on the right. And then group charts that interactive with one-another on the left and charts that have synchronized pivots on the right.

Tip #14
Linking to Images on the Internet

iDashboards would prefer if all of your images were uploaded into the 'Content' directory within the Administrative Application. However, there is the ability to link to images hosted outside of the 'content' directory.
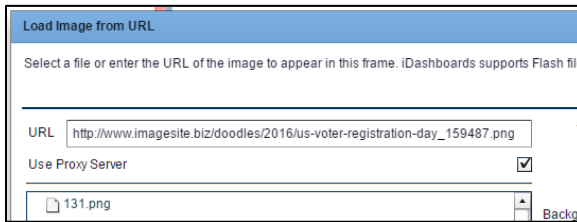
Test the URL

Yep, simply take the image URL and test it with your browser.

Enable 'Proxy Server'

If you're hosting iDashboards, it will be necessary to enable the Proxy Server within the Administrative System Settings. If iDashboards is hosting your server, this will already be enabled.

Add the checkbox, remove the checkbox

When defining the image URL, try both checkbox options for the setting called "Use Proxy Server". I don't know why, but try them both.

Avoid HTTPS

Try removing the letter "s" within "https" to resolve issues.

Troubleshoot the cross-domain policy

Go to the crossdomain.xml URL and interpret the settings. Not all websites will allow streaming connections to their hosted images.

`<domain>/crossdomain.xml`

Tip #15
Using the ViFrame Chart

The ViFrame chart has the extraordinary ability to display additional details that don't necessarily justify a graphical chart. This chart can be far more substantial than the HTML panel, because the ViFrame chart has the ability to connect to your data and use all of the core iDashboards features (like drilldown, pivot, interactive-intelligence, input parameters, etc.). Think of this chart as a 'notecard' or 'placard'.

The image below has two ViFrame charts.

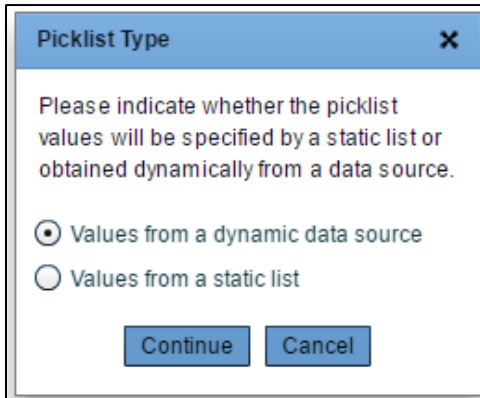Using Interactive Intelligence with other charts, these values can change.

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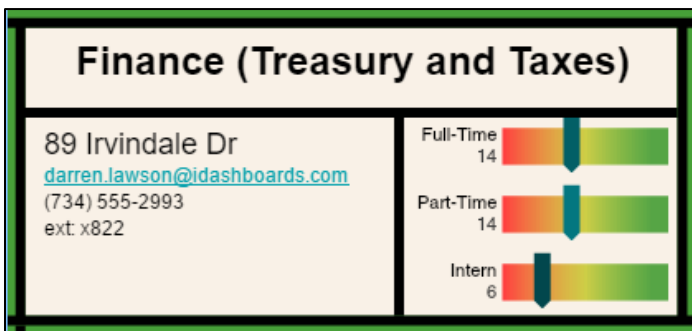
Tip #16
Creating a Dynamic Picklist

Quick crash course here; there are three methods to create a pre-defined drop-down list within an Input Parameter. Pay attention to the words 'Static' and 'Dynamic', as ONLY the Dynamic option will automatically update based on changes in your data.

1. **Static List**: Only exists within the chart/dashboard. Cannot be reused. List values are manually entered.
2. **Static Picklists**: Exists within the iDashboards environment and can be reused across the application. Has the ability to use a 'Display' value and 'Filter' value. List values are manually entered.
3. **Dynamic Picklists**: Exists within the iDashboards environment and can be reused across the application. Has the ability to use a 'Display' value and 'Filter' value. List values are retrieved from a data source similar to the process of creating a dynamic chart (select a data source, table, column, filters, etc.). Duplicate values within a column are automatically removed to reveal a unique list of data values.

Create a picklist by going to the Menu button and selecting "Picklists". See the User Manual section "Picklists" for details.

Picklist Type ✖

Please indicate whether the picklist values will be specified by a static list or obtained dynamically from a data source.

◉ Values from a dynamic data source

○ Values from a static list

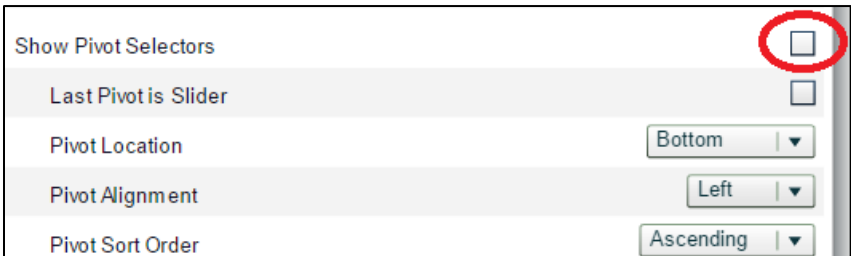[Continue] [Cancel]

Tip #17
Pivot Synchronization

Some dashboards create scenarios which many charts share a common pivot value. If so, use the dashboard Pivot Synchronization feature. Then, it can be changed in one chart to change all the charts. Pretty cool!

Open up the Dashboard Designer, activate the feature icon (see red circle). Then, save the dashboard.

For better dashboard visualization, hide the Pivot selection on all but main chart by unchecking "Show Pivot Selectors" option within the Chart Designer (see red circle).

Show Pivot Selectors	☐
Last Pivot is Slider	☐
Pivot Location	Bottom ▾
Pivot Alignment	Left ▾
Pivot Sort Order	Ascending ▾

Learn More
User's Manual Section: "Dashboard Designer"

Tip #18
Macros in Chart Titles

Meaningful chart titles reflect thoughtful and proper data visualization information for users. In particular when drilling down or utilizing parameters, using the various macro options is perfect for developing meaningful chart titles.

When drilling down be quick to include the values being used for drilling down by adding them as ${value: <drilldown field>}

Chart Title	Order Review List for ${value:Inside}	${}

If parameters are used, include them to make sure it is clear what the chart is representing as ${param: <parameter field>}

Chart Title	Backlog by Inside Sales for Div ${param:Div}'s ${param:Dept} staff	${}

And let's not forgot we can use the date macros in similar fashion. Here is an example:

Chart Title	Sales as of ${currdate}	${}

Learn More

User's Manual Sections referring "macro" and "Chart Title"

Tip #19
Presenting More Than 1000 Data Rows

iDashboards charts can connect to an unlimited amount of data. However, after the chart query takes place (called 'result set'), standard charts have a 1,000 row display limit, and pivot charts have a 3,000 row display limit.

Most charts utilize small numbers of data records but in some unique instances, displaying more than 1000 records, may be required.

Note: depending on the computing environment, the chart may respond a little slower than users are accustomed to. Help end-users realize everything is okay.

Key points to know:

1. A pivot axis must be defined on the chart to allow 3000 data records..
2. Pivot data values can be unique, repeating, or constant
3. The pivot axis can map to a data column OR try using an Expression (think 'ALL')
4. Works with any chart type

Specify Chart Axes:

Axis	Name	Data Column	Data Type	Function		Pivot	Hide?
X	ID	ID_ ▾	Number				
Y1	Enterprise Users	ID_Enterprise ▾	Number	[None] ▾		▾	☐
Y2	Pivot	(Expression) ▾	String		▾	1 ▾	☐

Specify an Expression for the Selected Axis:

'ALL'

▾ Axis Variables

x

Data Type: String ▾

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Tip #20

## *Embed a Webpage Into a Dashboard*

Users have the ability to embed an HTML webpage into a dashboard frame!

Rules:

- Preserve Raw HTML must be checked
- Embedded webpage only appears using the iDashboards HTML5 User Application
- Success depends on many undocumented technical variables

In the iDashboards User Application, select a frame and insert an HTML panel. Using the example below, note the reference to a webpage:
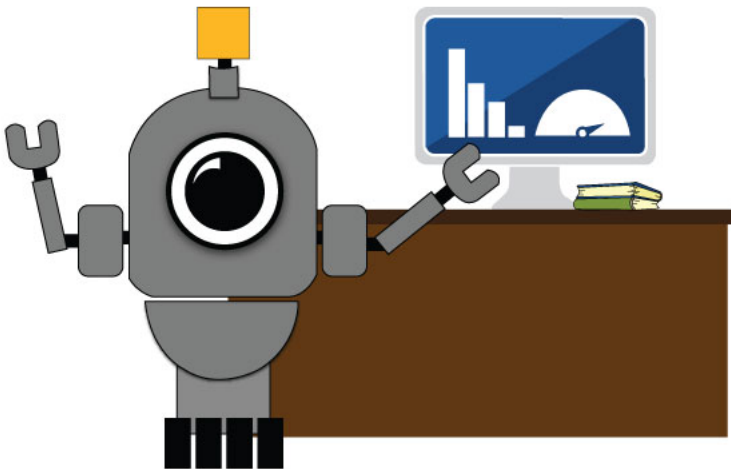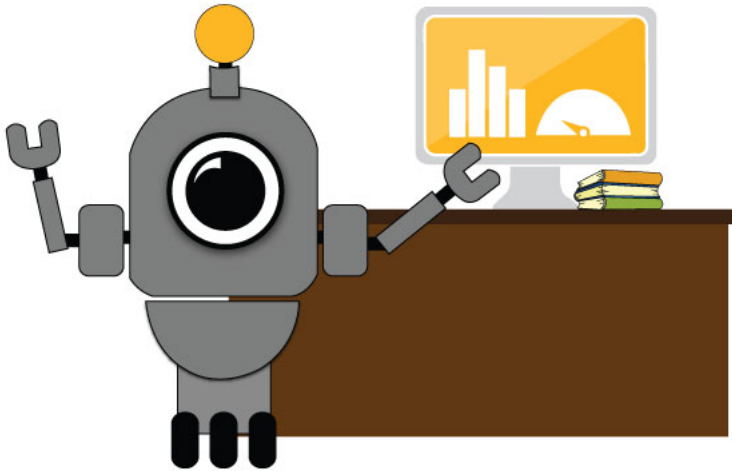
```
<iframe id="forecast_embed" type="text/html"
frameborder="0" height="500" width="100%"
src="http://conference.idashboards.com/">
</iframe>
```
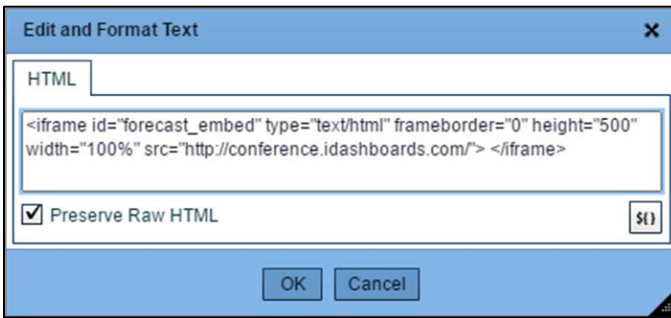

Using the HTML5 Viewer Application within iDashboards, open the dashboard containing the embedded code. Voila!

Note: *Height and width can be modified to account for the size of your frame.*

Find the eight differences!