

Beyond Jobs: Kauffman Challenge Deliverables

1f Tech analysis: initial analytics functionality

Version Control					
Version	1.0	Release Date	Jan. 13, 2019	Authorized by	Vic. Luscombe
<ul style="list-style-type: none">NOTE: This document deals with the first body of work stemming from Business Spec. 441 "Graphic Analytics".					

Context

Using visual representation of search results is a powerful way of showing data trends and patterns.

We have used analytics in Uflexi to visualise an agencies Bookings Report and intend to extend this functionality across other reports.

Decisions

We chose jqPlot which is a plotting and charting plugin for the jQuery Javascript framework. As we already use JQuery in Uflexi it was a choice that utilised developers existing skills. It's an open source project and well supported in that the JqPlot.com website has many examples to aid developers and there are many user forums where information can be shared and problems discussed. jqPlot has been tested across a broad range of browsers. Jqplot uses pluggable renderers so you can choose which ever renderer suits your purpose. All renderers are well documented on the jqPlot website.

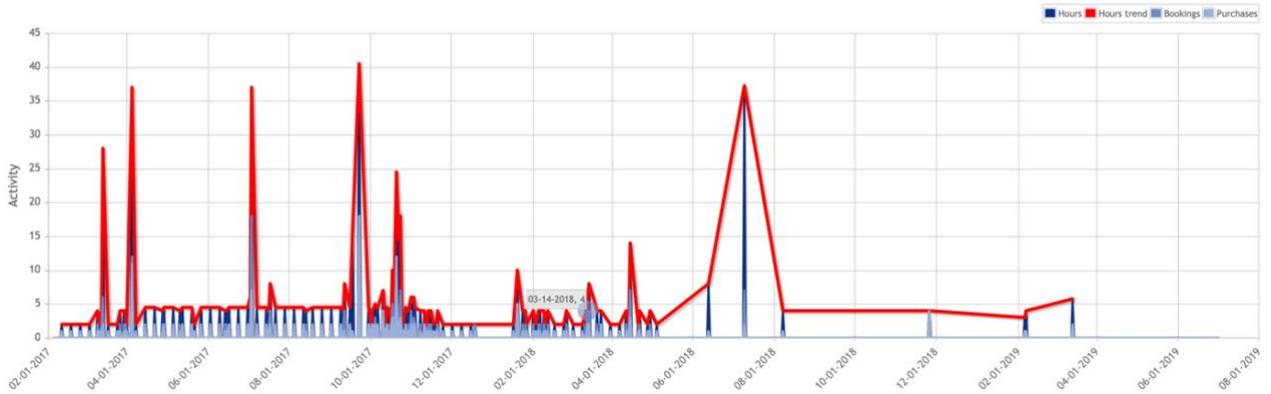
The elements of each plot are customizable so you can attain whichever look and feel you desire. Customization of the plot is achieved by passing options to the \$.jqplot function. So it's very easy to apply specific branding colours to the chart or graph, move labels around and change axis wording.

Other features that can be applied using the 'options' object are animation effects, whether to fill the charts with colour, choice of background colour and whether to show a grid on the chart or graph.

We appreciated the ease of customization; and it opens up the possibility of agency branded analytics.

This section analyses the bookings produced by your search

Timeline

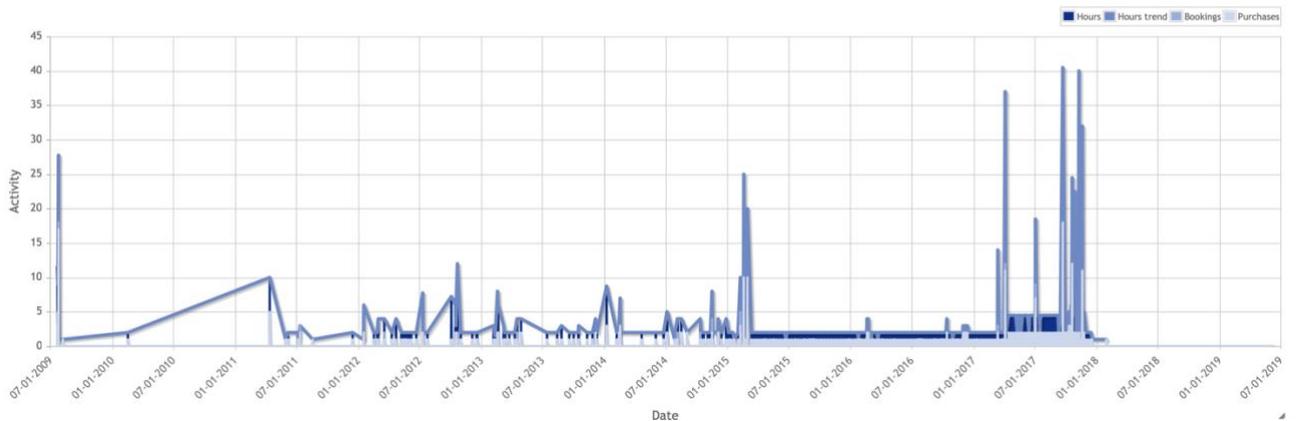


Screenshot of current colour scheme for the Bookings Reports chart.

The colour scheme can be quickly and easily amended, just by changing a line of Javascript, to a blue series:

This section analyses the bookings produced by your search

Timeline



Core code

Example 'options' code :

```
options={
```

```
    title: "",  
    dataRenderer: ajaxDataRenderer,  
    rendererOptions: {  
        smooth: true  
    },  
    animate: true,
```

```

stackSeries: false,
seriesDefaults: {
  showMarker: false,
  fill: true,
  fillAndStroke: true
},

// blues with red trend line
seriesColors: ["rgb(16, 48, 135)", "rgb(255, 0, 0)", "rgb(111, 137, 196)", "rgb(154, 175, 218)"],
series:[
  {label: 'Hours'},
  {label: 'Hours trend',
    lineWidth: 4,
    fill: false,
    fillAndStroke: false},
  {label: 'Bookings'},
  {label: 'Purchases'}
],
legend: {
  renderer: $.jqplot.EnhancedLegendRenderer,
  show: true,
  placement: 'outsideGrid',
  location: 'n',
  marginTop: '0px',
  marginRight: '-1210px',
  marginBottom: '20px',
  rendererOptions: {
    numberOfRows: 1
  }
},
axesDefaults: {
  labelRenderer: $.jqplot.CanvasAxisLabelRenderer
},
axes: {
  xaxis: {
    renderer: $.jqplot.DateAxisRenderer,
    rendererOptions: {
      tickRenderer: $.jqplot.CanvasAxisTickRenderer
    },
    pad: 0,

```

```

    label:'Date',
    tickOptions: {
        showGridline: true,
        formatString:'%m-%d-%Y',
        angle:-45
    }
},
yaxis: {
    //renderer: $.jqplot.CanvasAxisRenderer,
    tickRenderer:$.jqplot.CanvasAxisTickRenderer,
    pad: 0,
    min:0,
    label: 'Activity',
    tickOptions: {
        showGridline: true,
        suffix: "
    }
}
},
grid: {
    drawBorder: false,
    shadow: false,
    background: 'white'
},
highlighter: {
    show: true,
    sizeAdjust: 15
},
cursor: {
    show: false
}
}

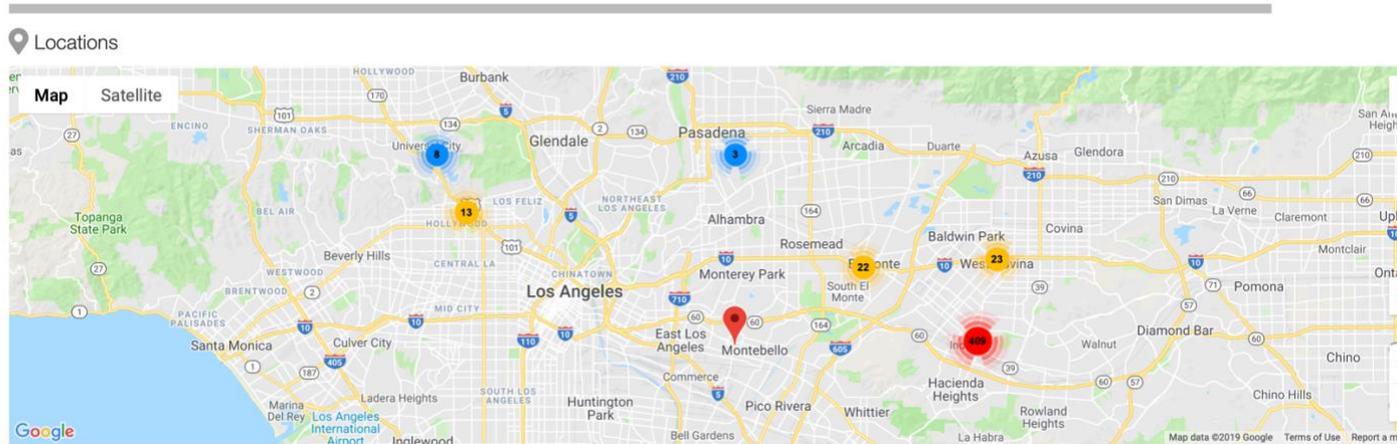
```

Future plans include using different types of jqPlot charts to enhance the reporting capabilities within Uflexi.

[Interface to Google Maps](#)

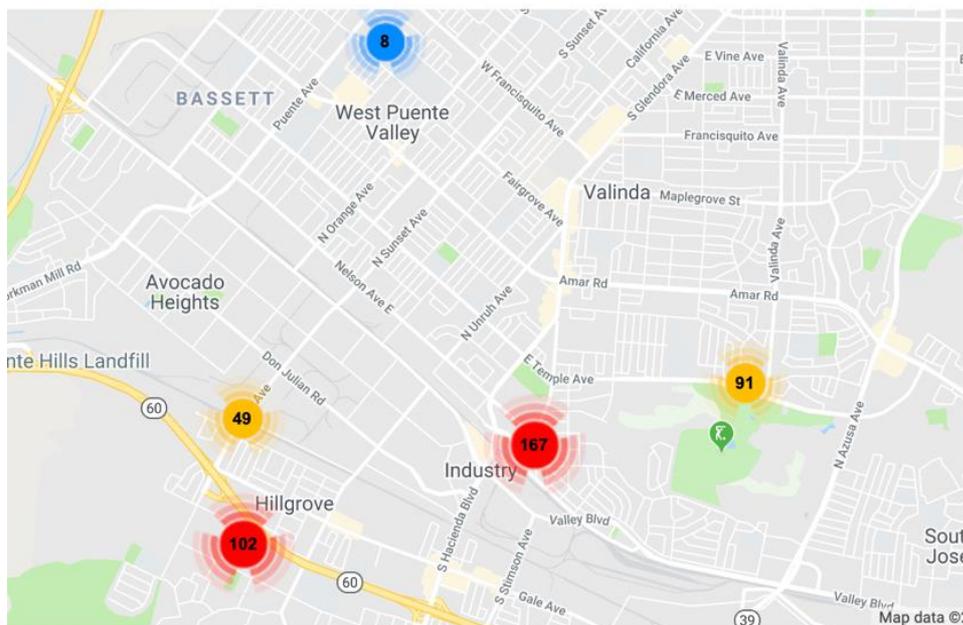
Also for visual reporting in Uflexi, we've used Google maps and marker clusters to show where bookings are distributed across a location.

Example showing clusters of bookings across Los Angeles.



Nice feature of the marker cluster is that you can investigate the areas you're most interested in and see the clusters disperse to show more accurate locations as you zoom into the map.

Eg.



And vice versa when zooming out –

