CCC – Community Charting Components

Pedro Alves - webdetails

The future of charting in Pentaho

The future of charting in Pentaho

(but they don't know it yet)

Why?

Why?

Charts play a very important role in dashboards

Why?

Charts play a very important role in dashboards

Indispensable visualization elements

Why?

Charts play a very important role in dashboards

Indispensable visualization elements

Charts are cool

Why?

Charts play a very important role in dashboards

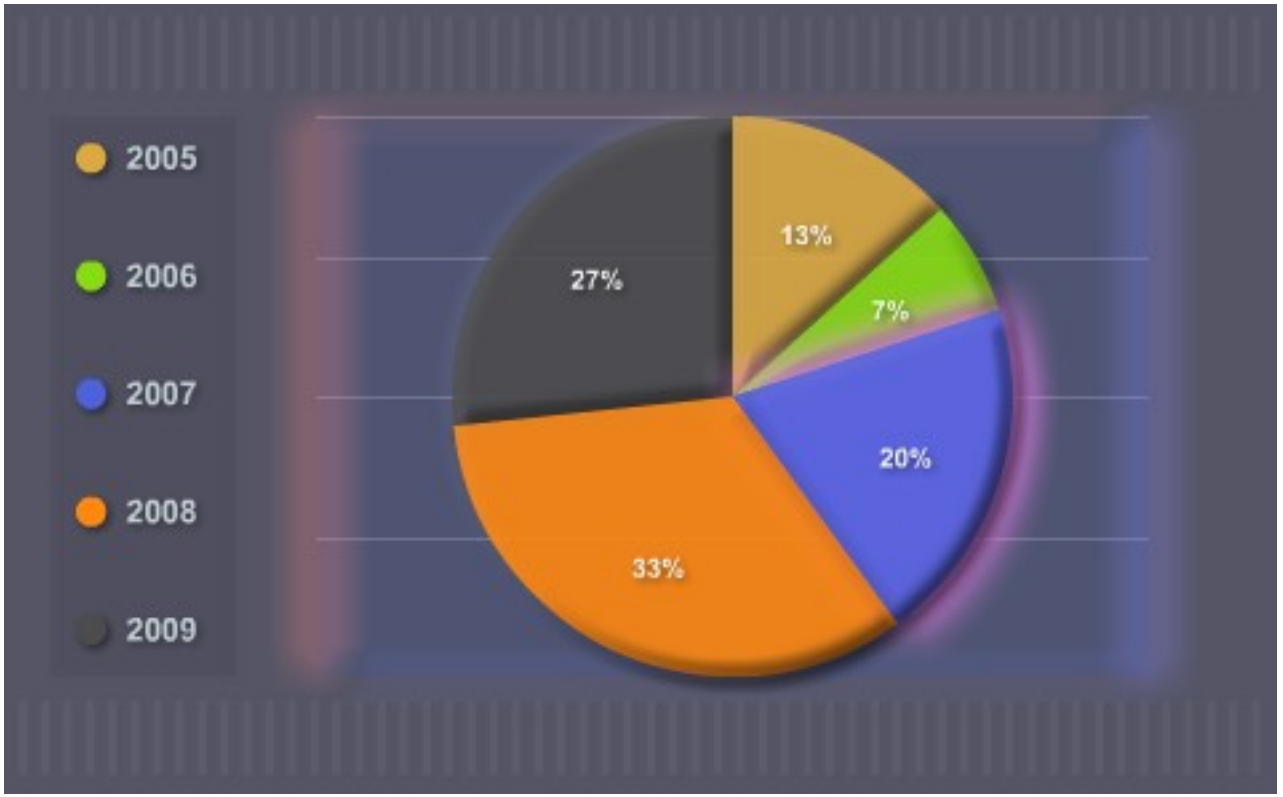
Indispensable visualization elements

Charts are cool

The ones we have suck...

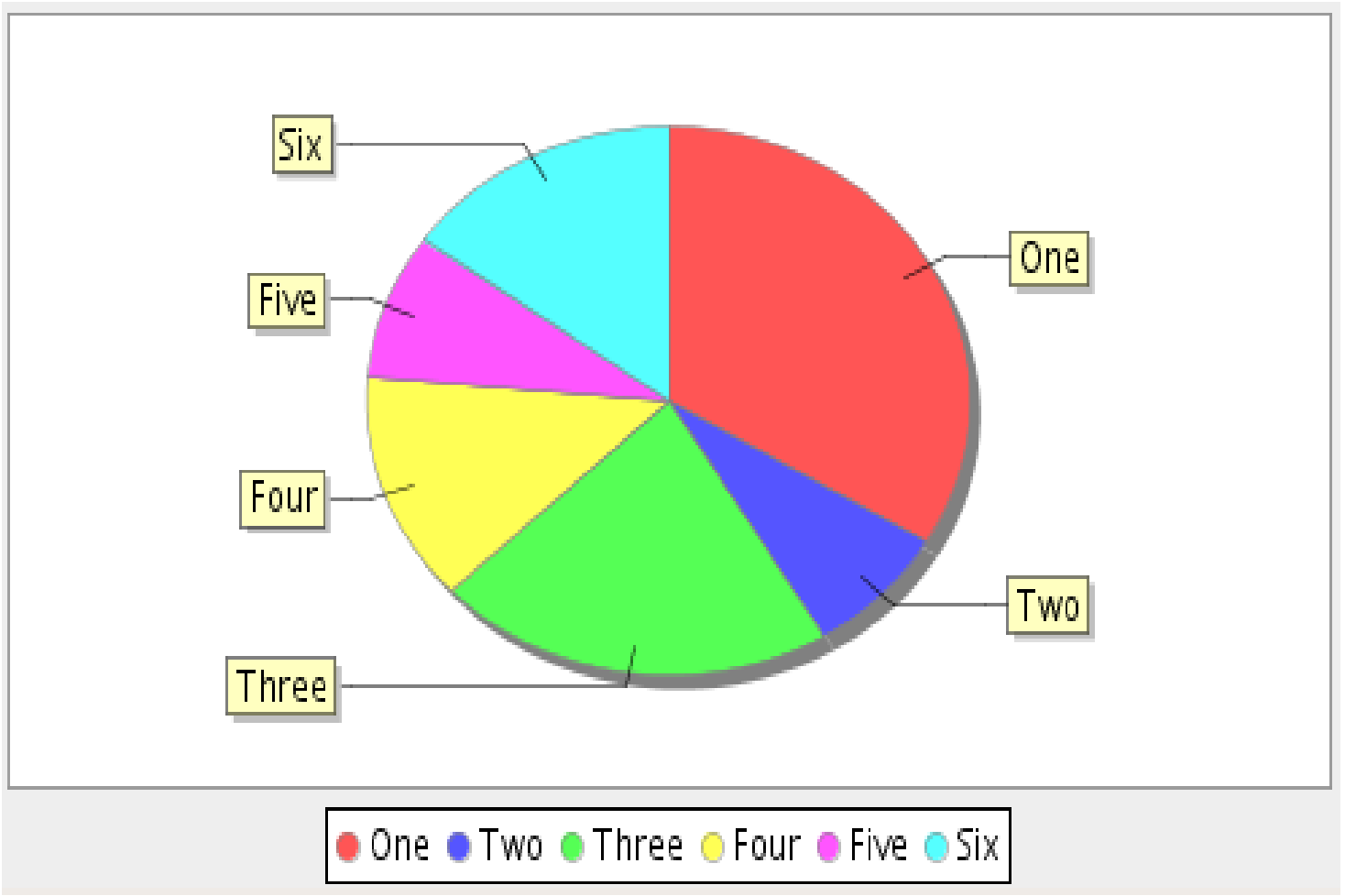
So we started looking for an alternative

We looked



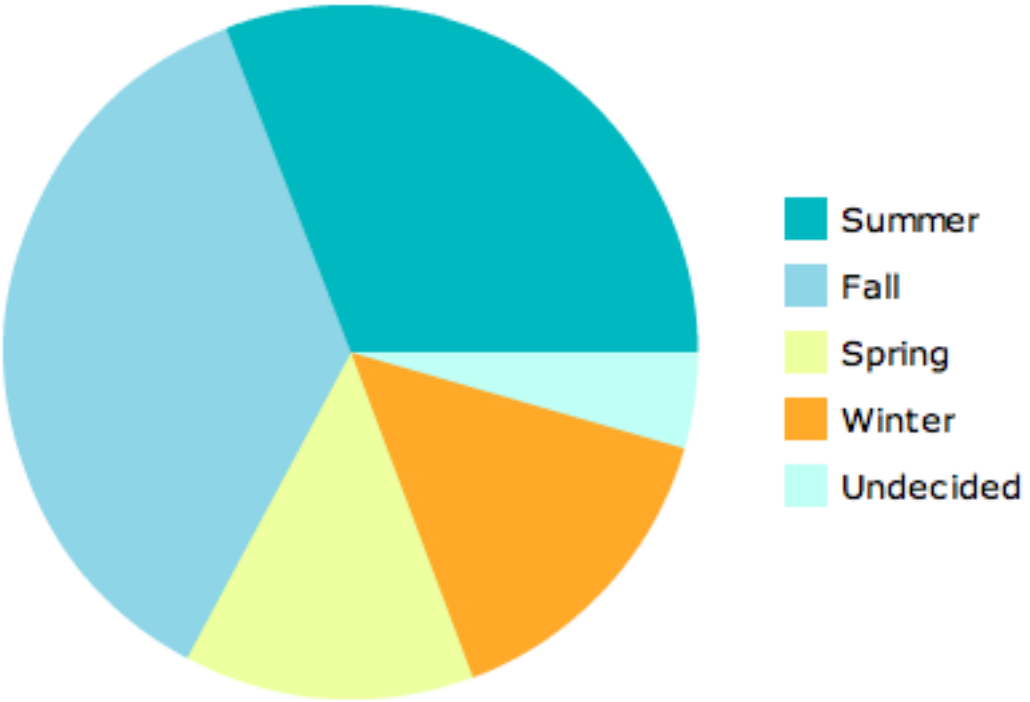
Xml/Swf

We looked

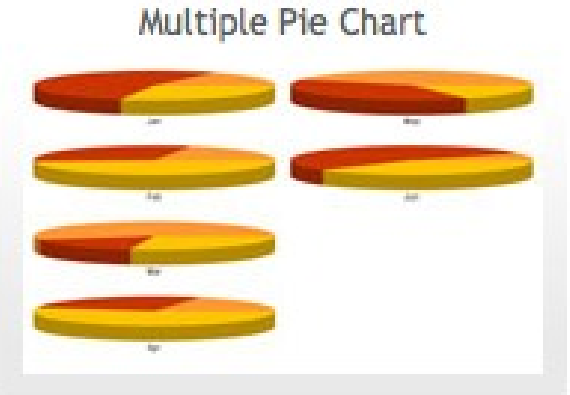


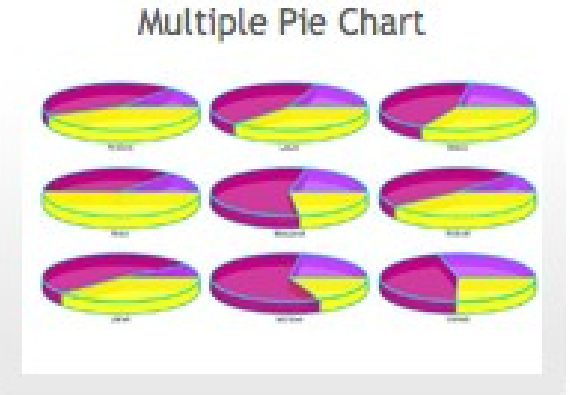
JFreeChart

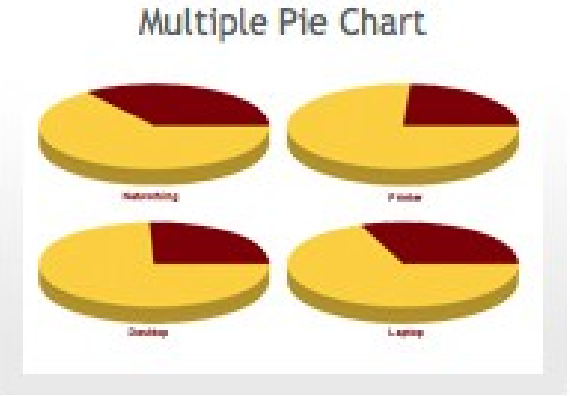
We looked



We looked

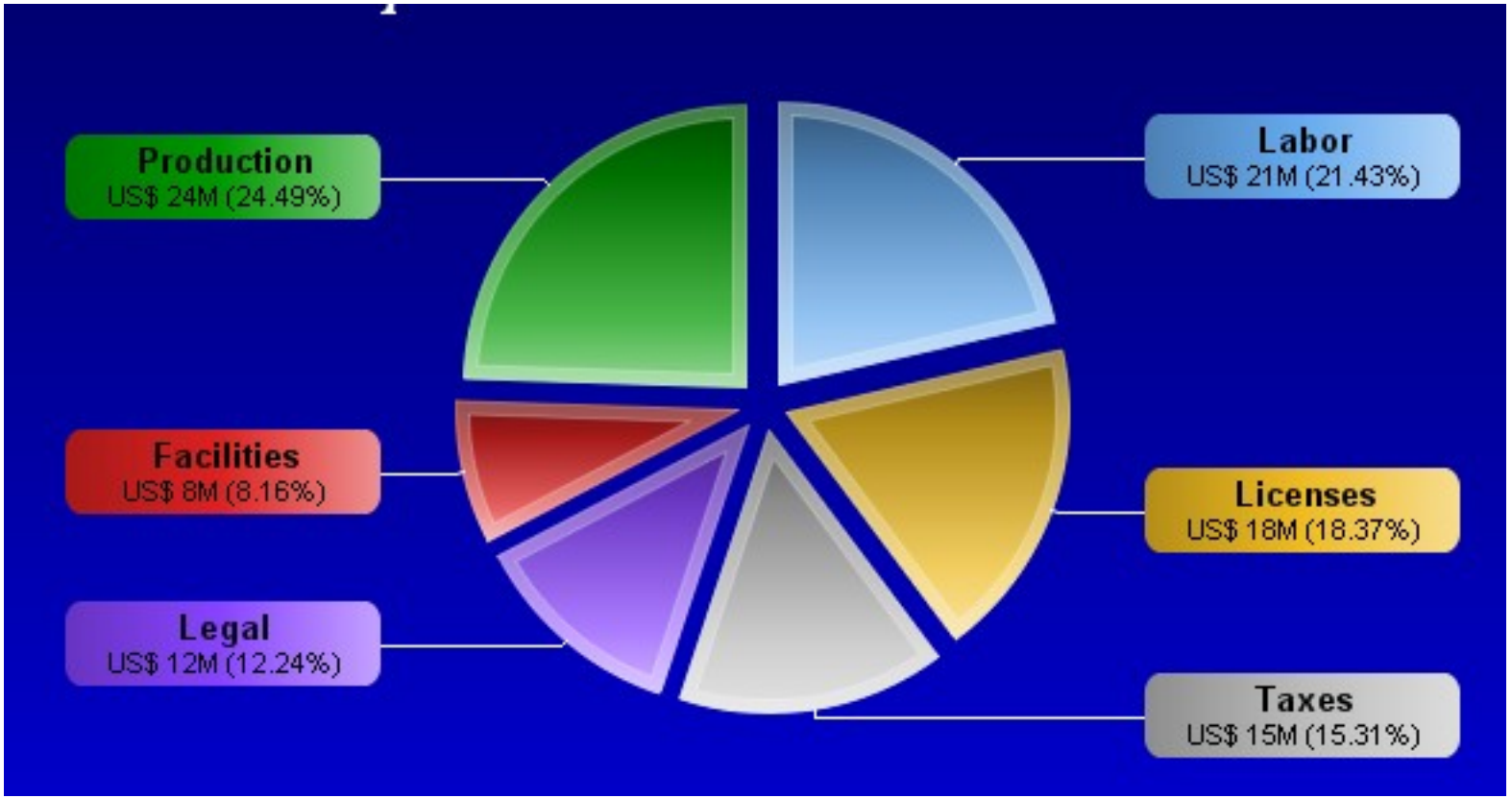

Multiple Pie Chart


Multiple Pie Chart

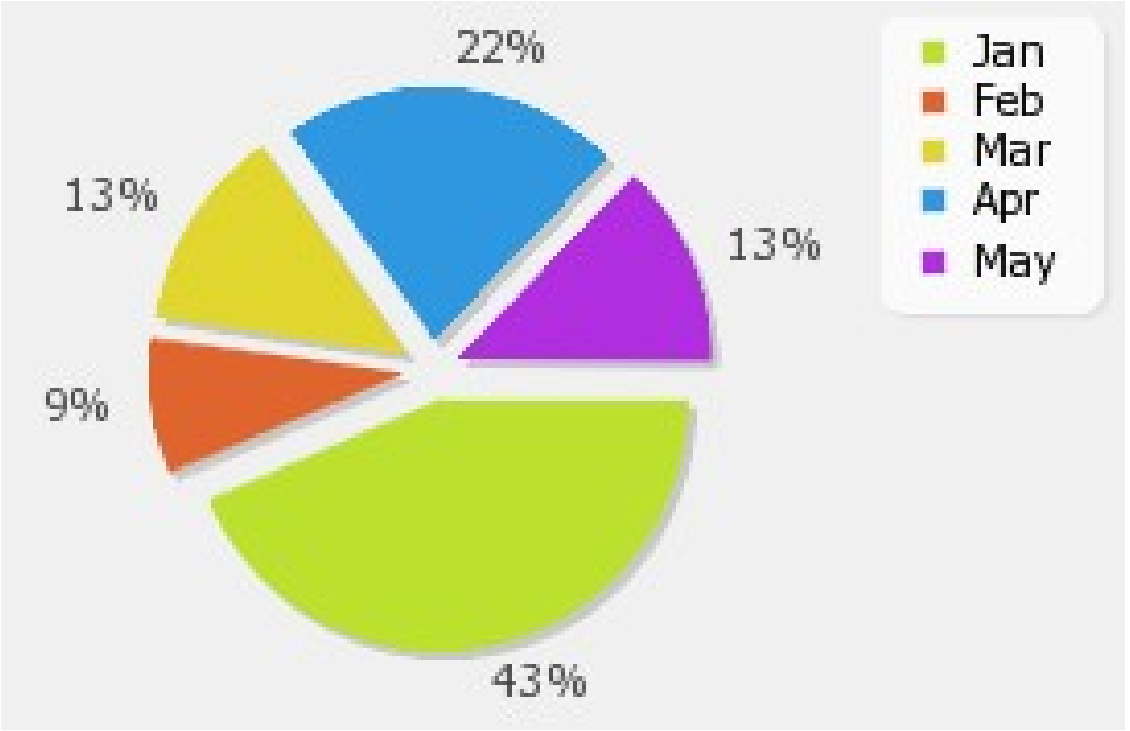

Multiple Pie Chart

Pie Chart

Looked again

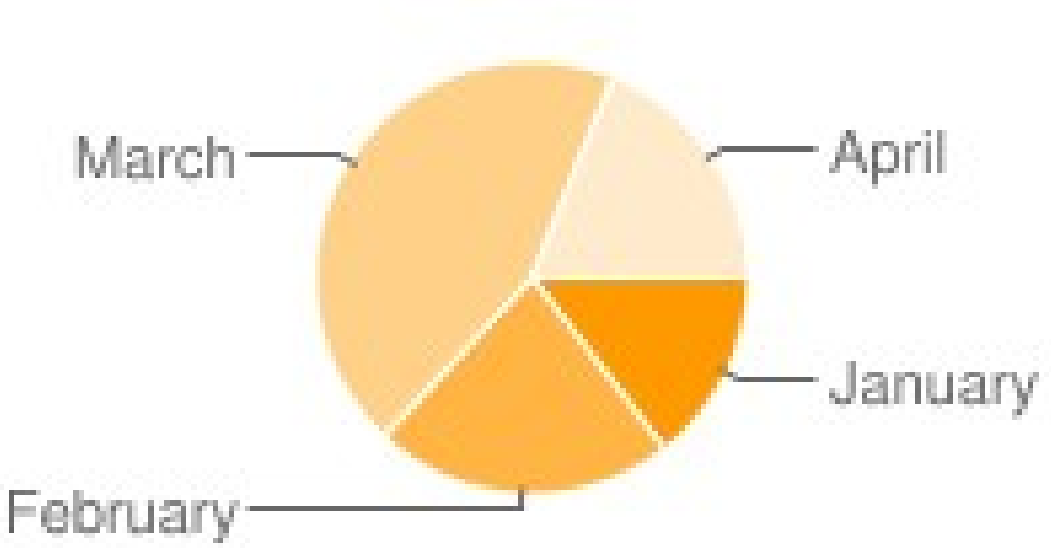


Looked again



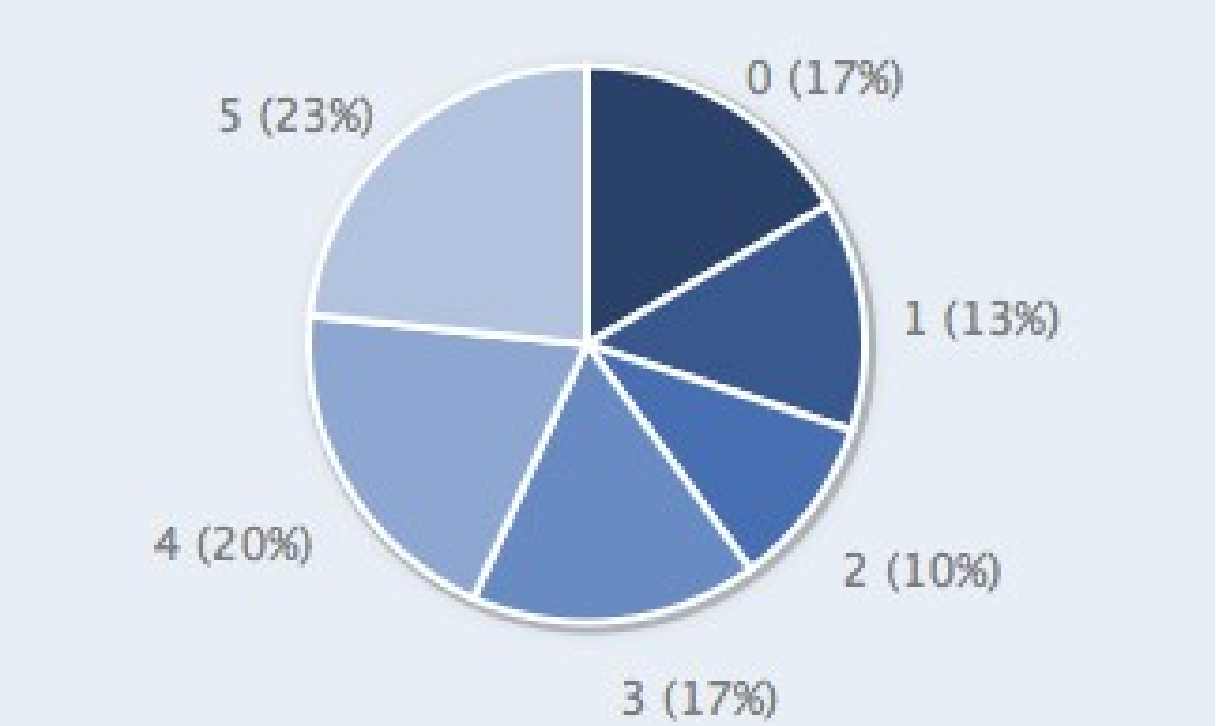
PChart

Looked again



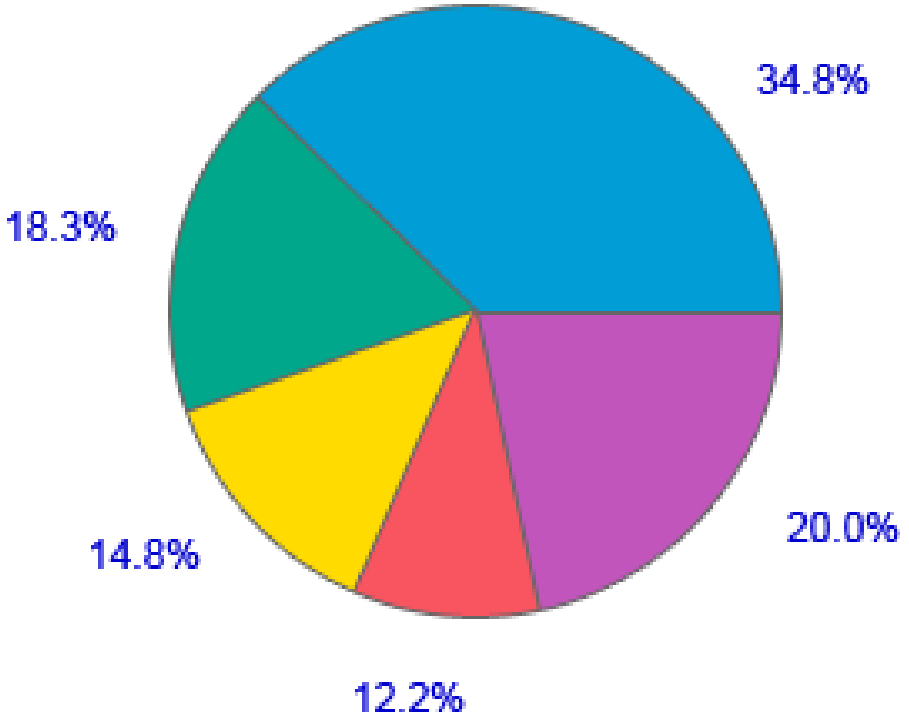
Google Chart Tools

Looked again

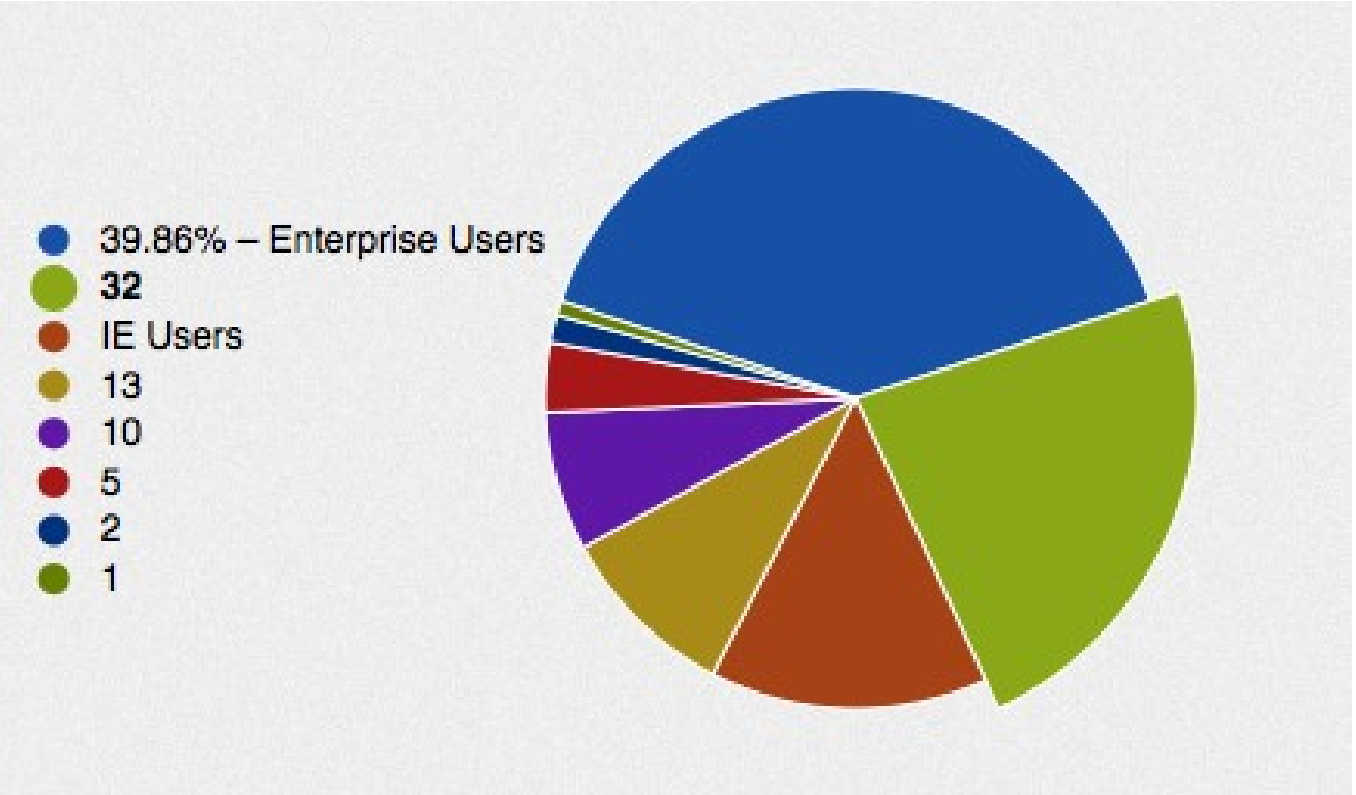


PlotKit

Kept looking

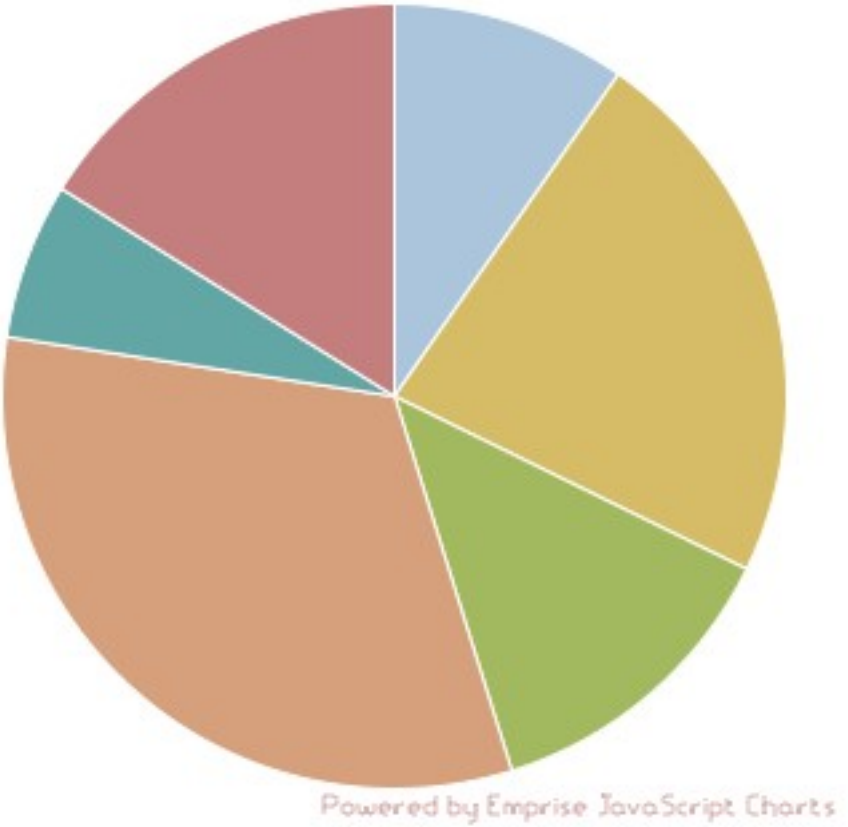


Kept looking



Graphael

Kept looking



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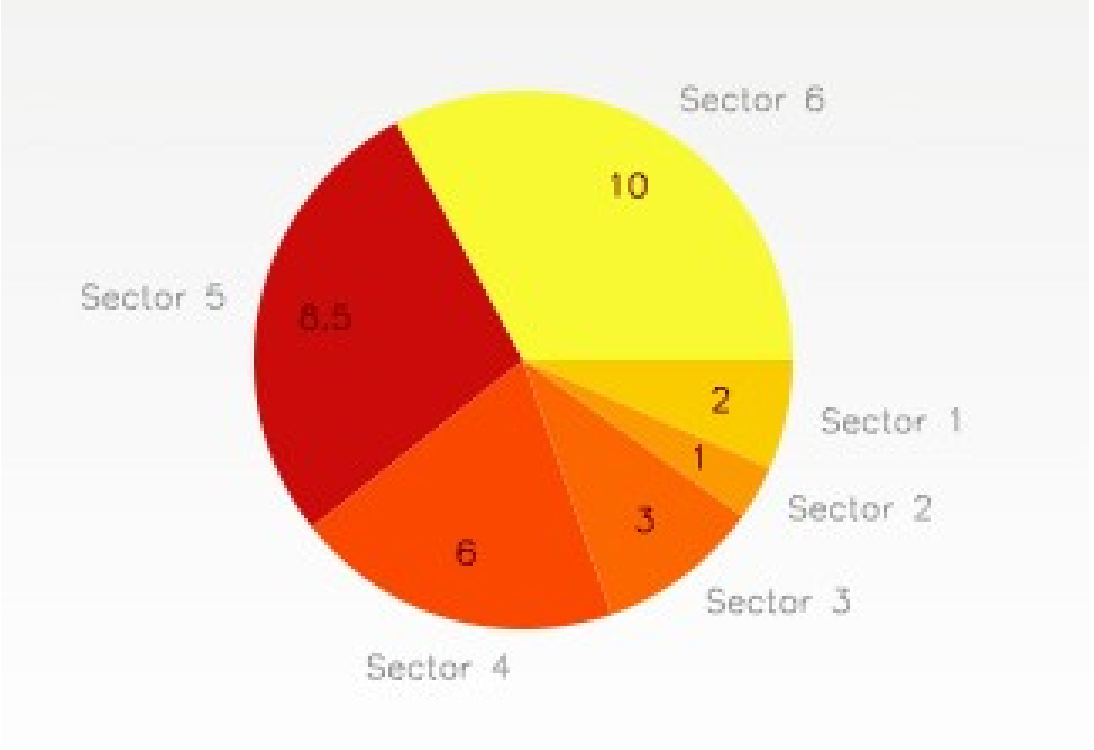
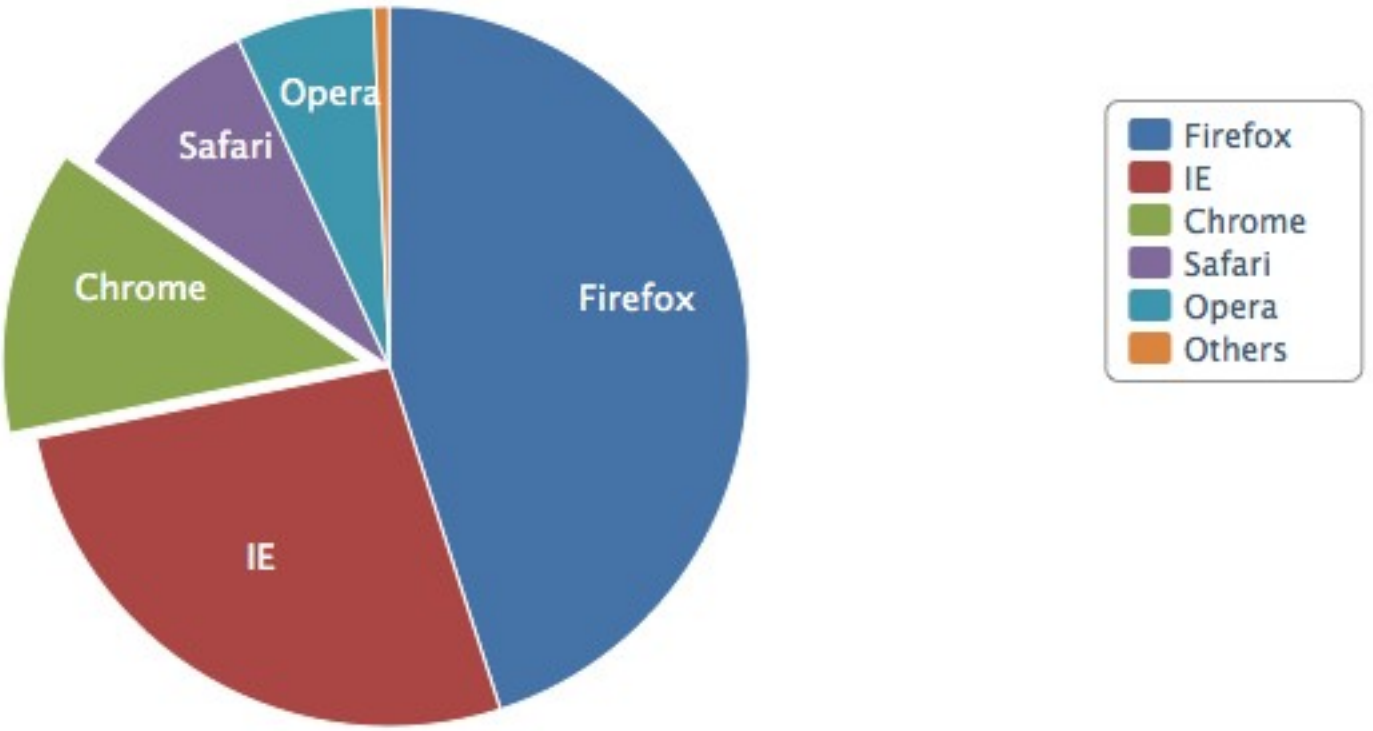


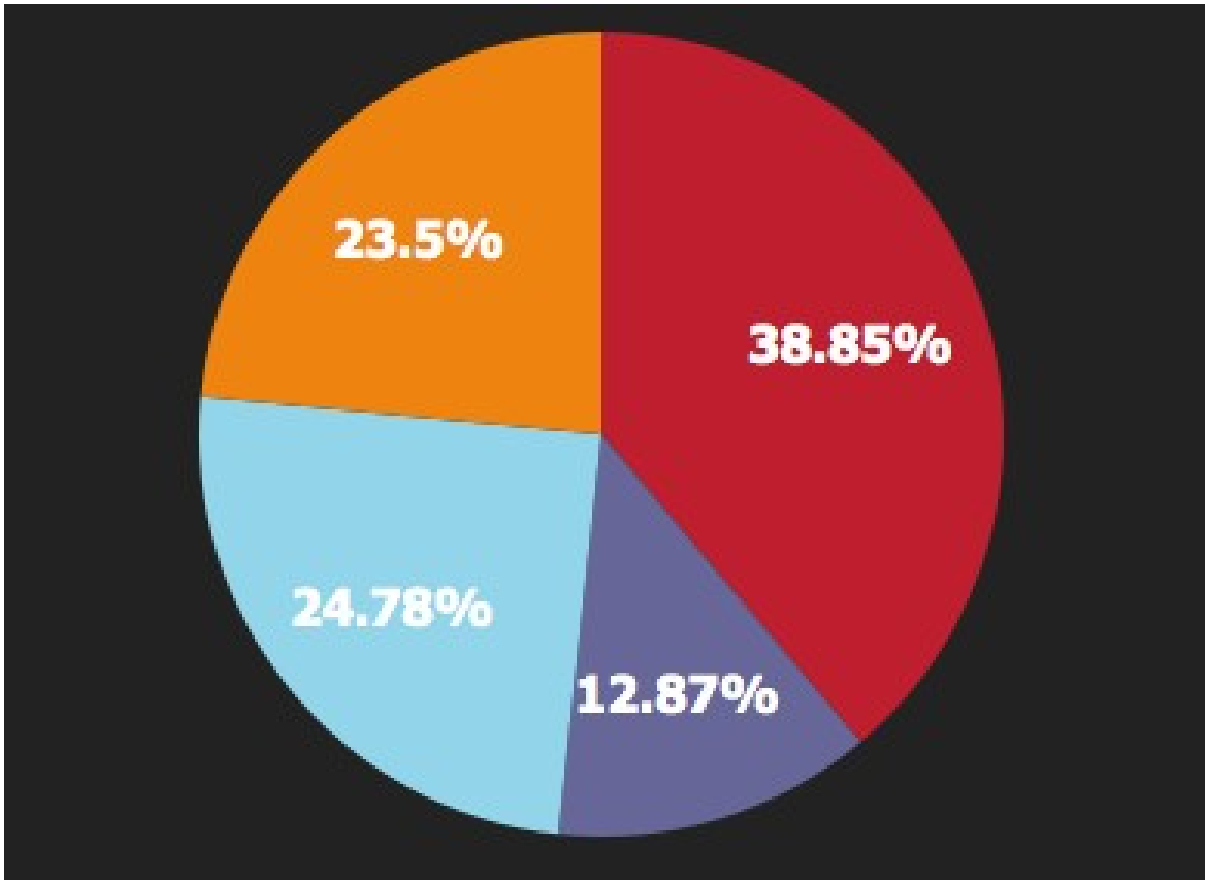
JsChart

Almost gave up

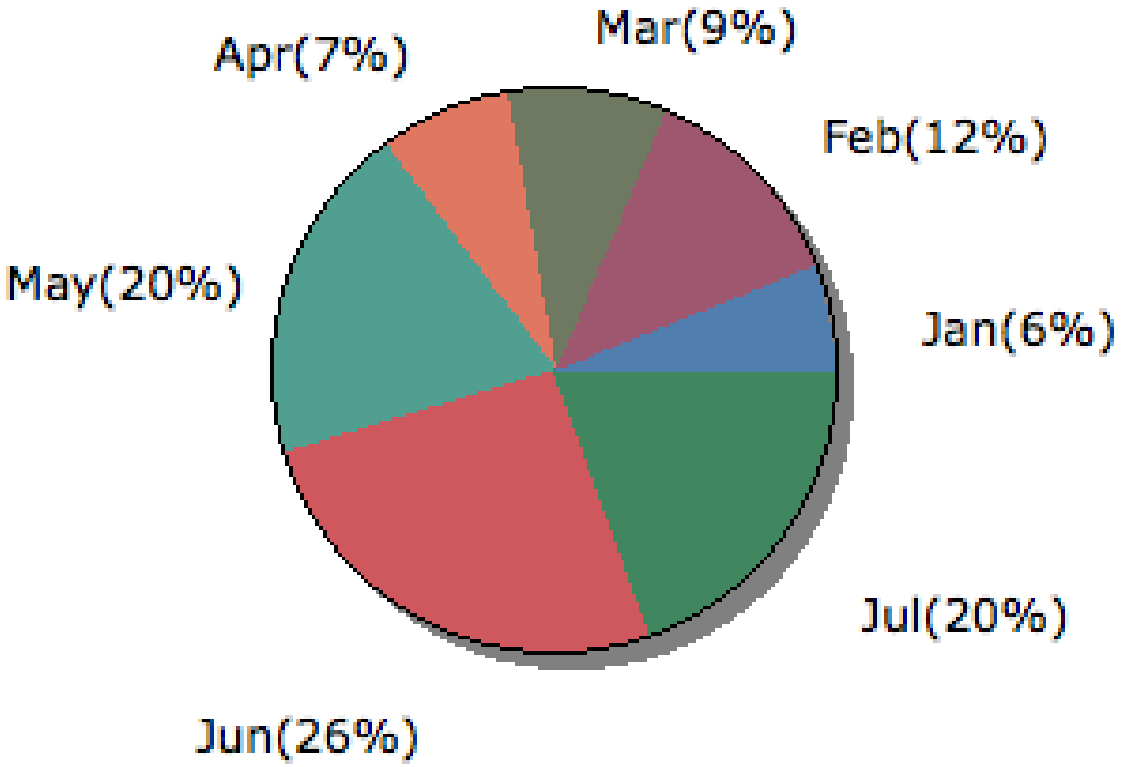


HighCharts

Almost gave up



Almost gave up

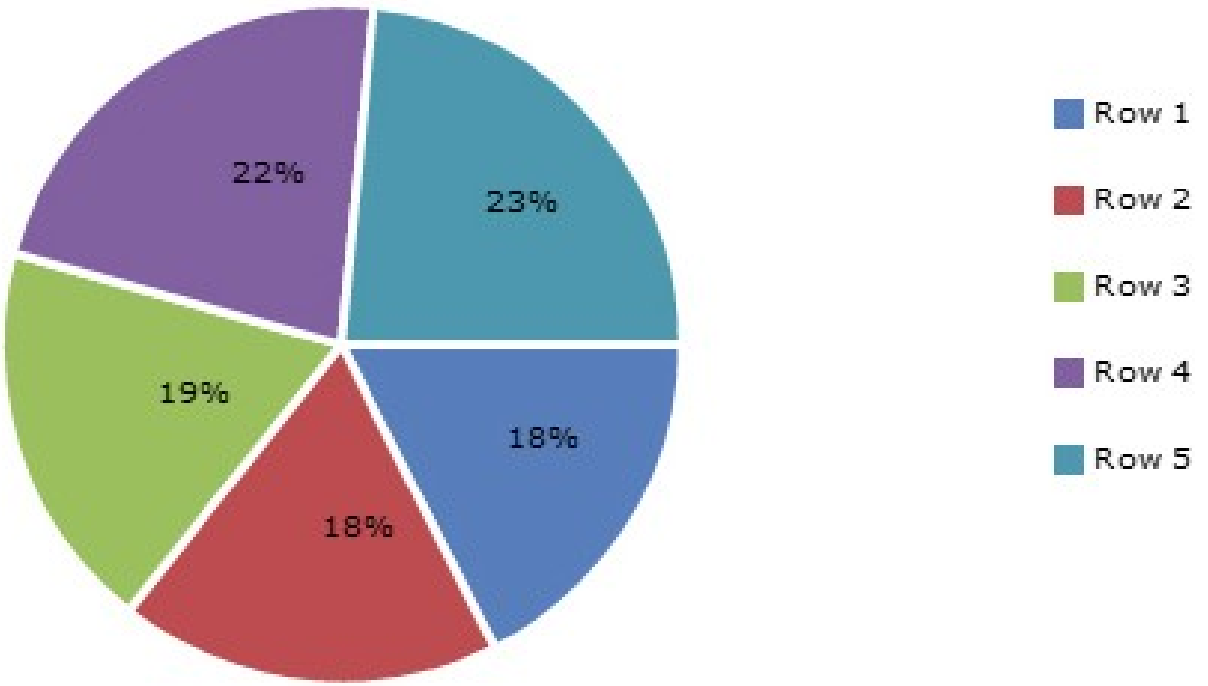


PieGraph

Almost gave up

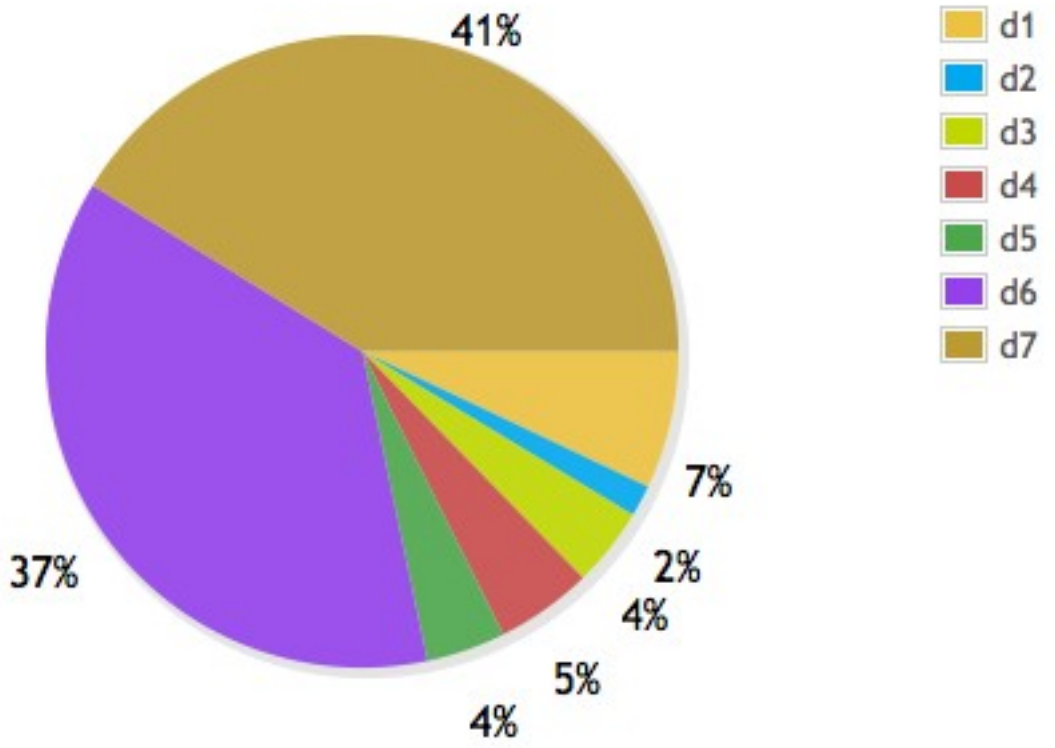
JQPlot

But continued looking



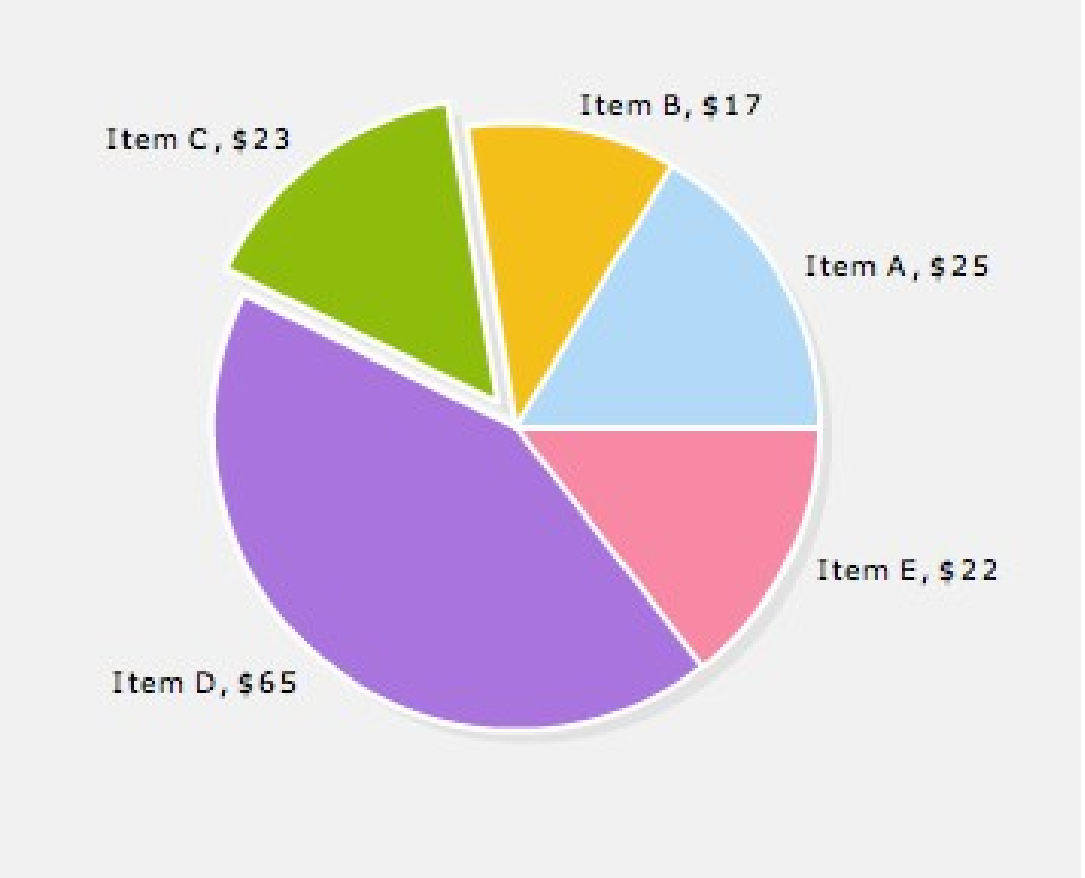
MilkChart

But continued looking

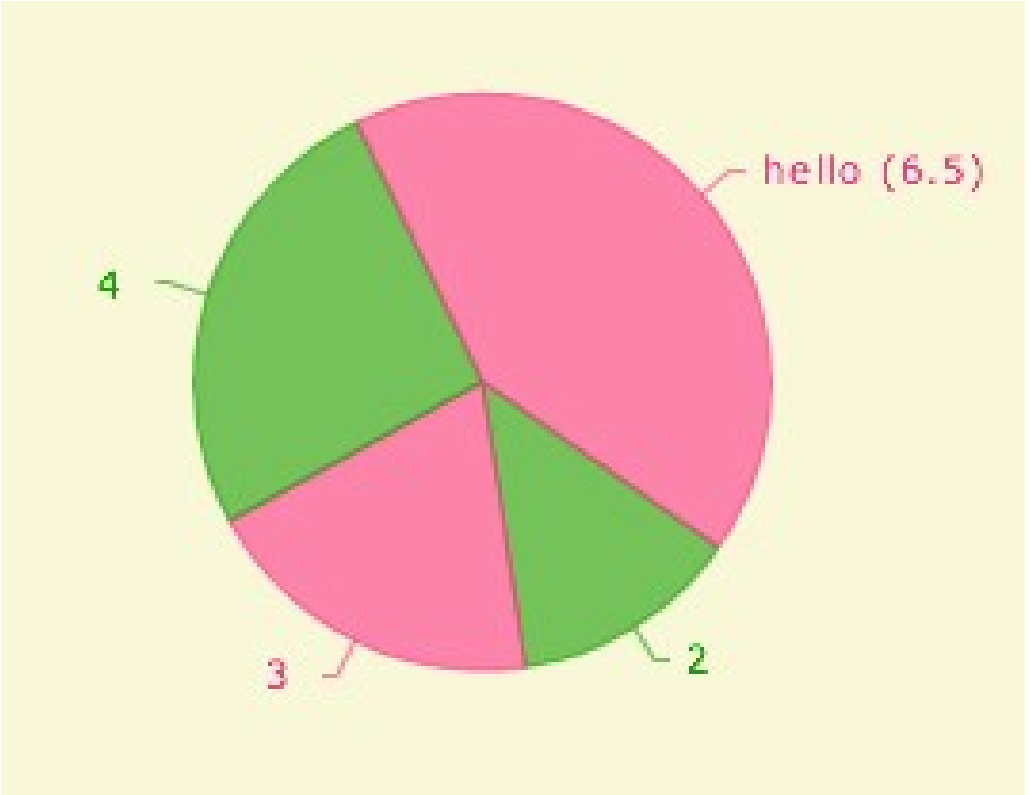


ProtoChart

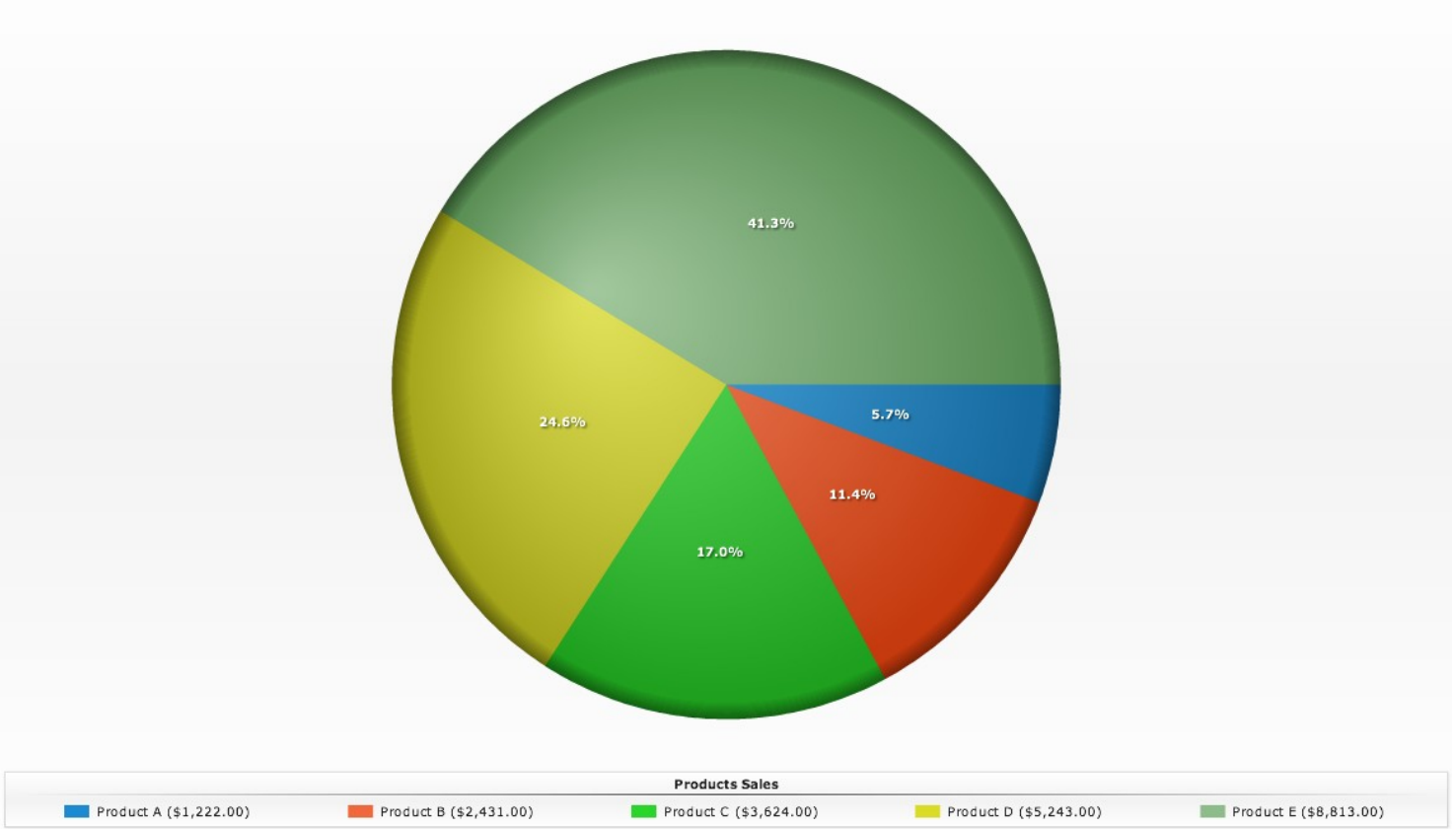
But continued looking



But continued looking

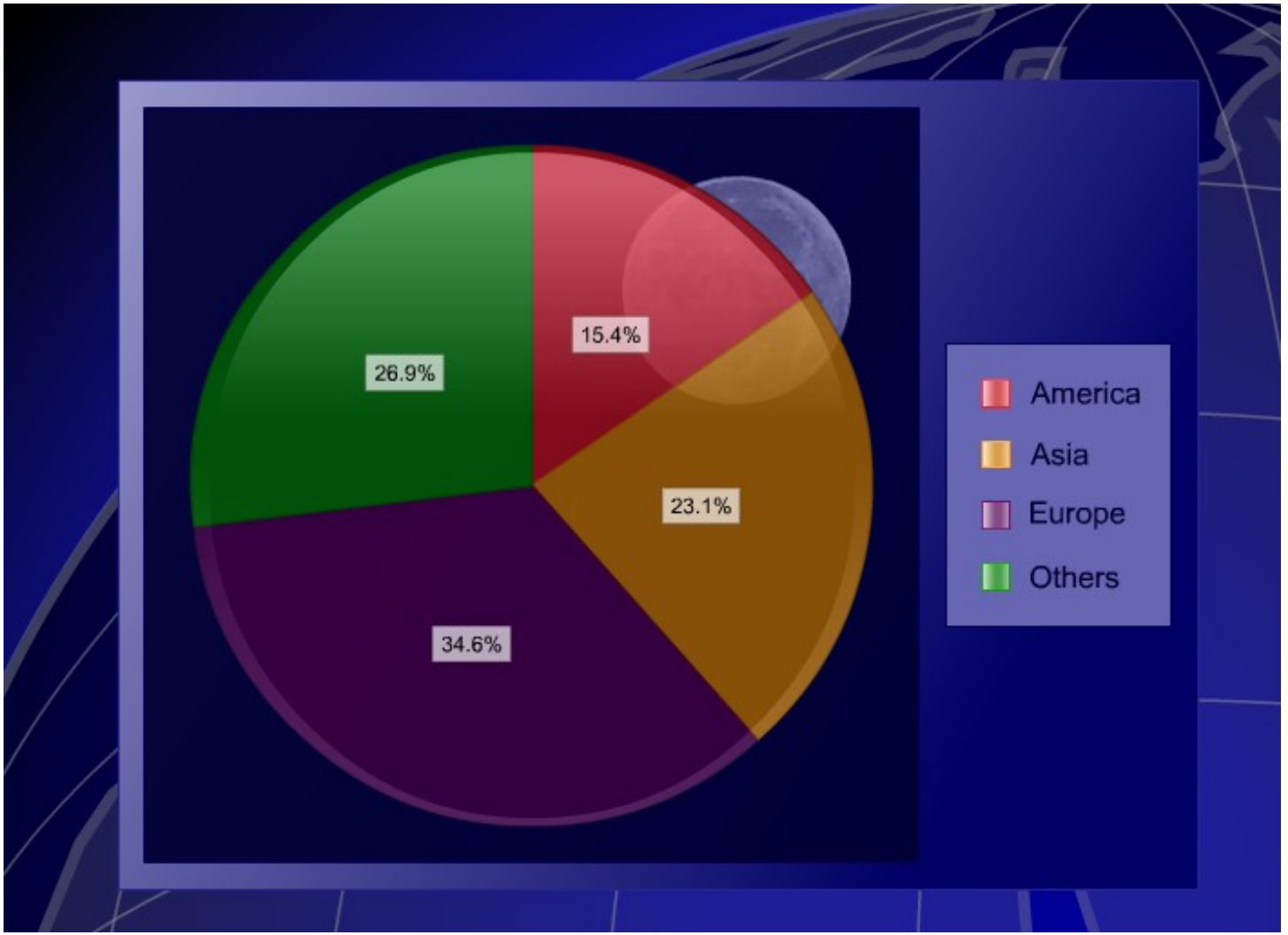


Until we could look no more



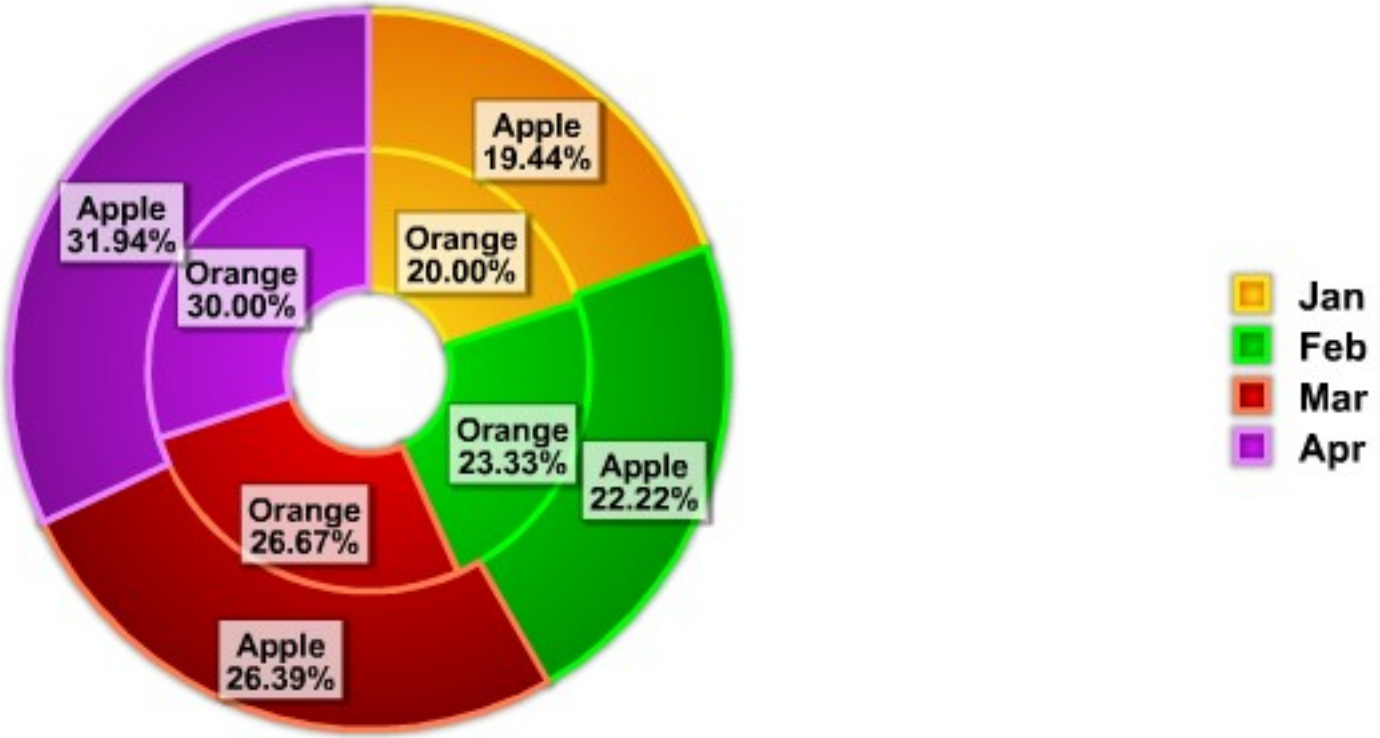
AnyCharts

Until we could look no more

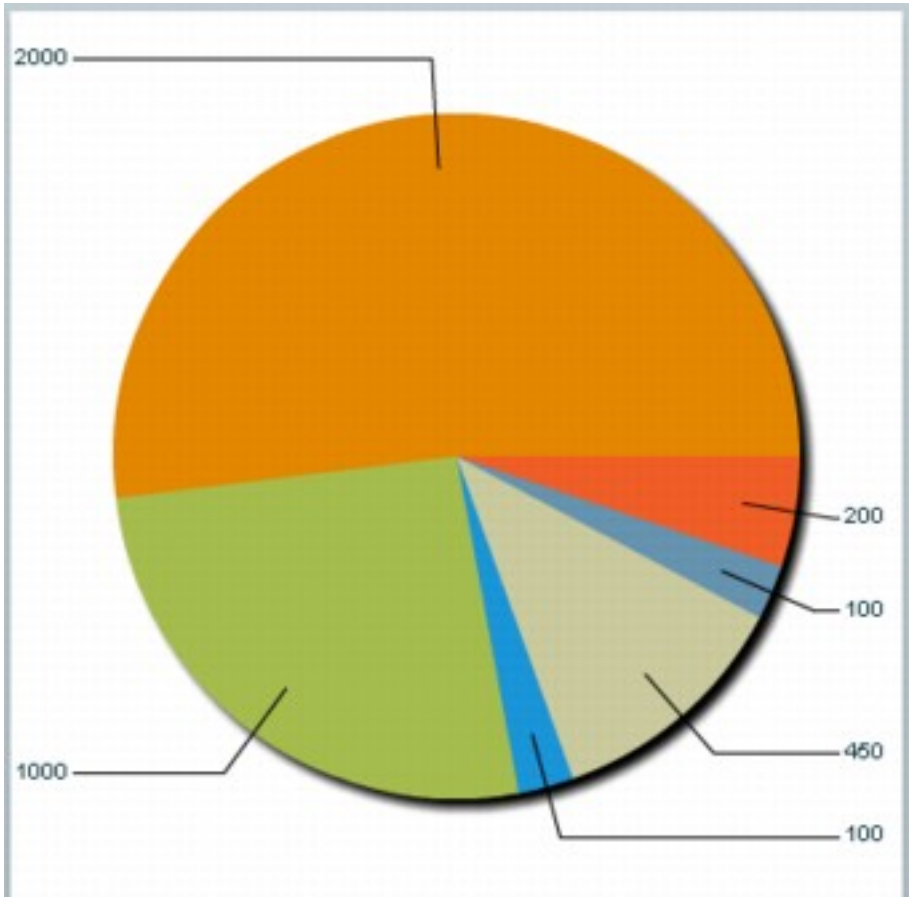


RichChartServer

Until we could look no more



Until we could look no more

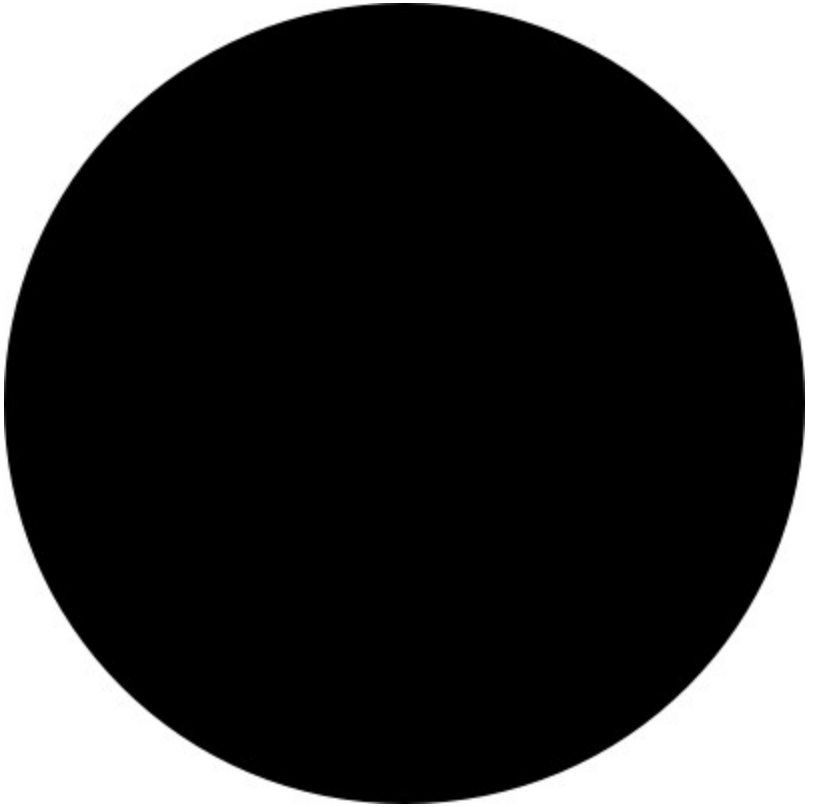


!

We got to two conclusions

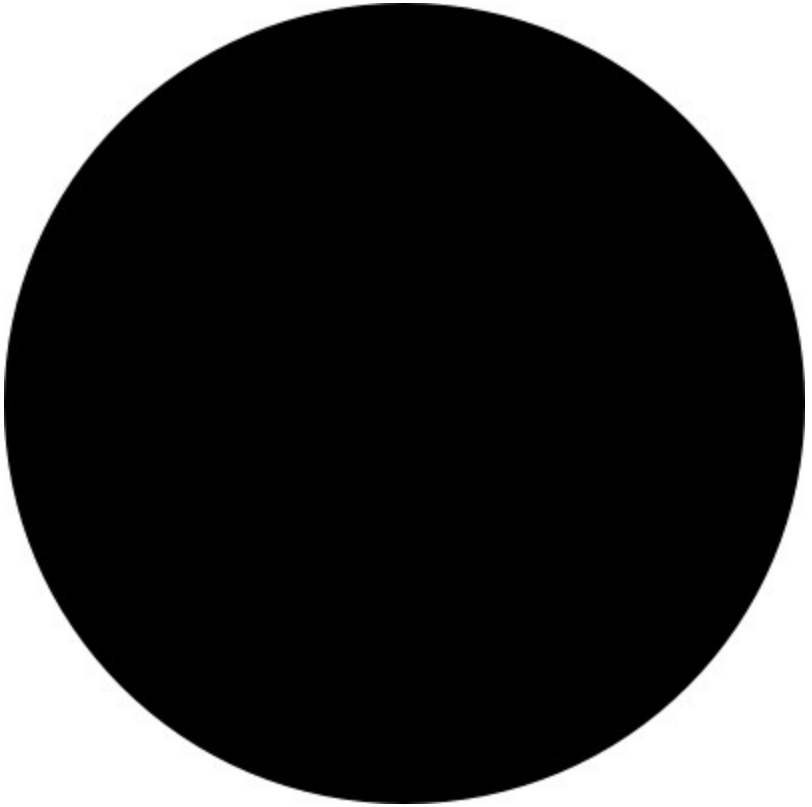
#1

#1



They're all round!

#2



#2

They're all crap!

What now?

The Solution

The Solution

Chartbeans Project

The Solution

Chartbeans Project

Pentaho initiative

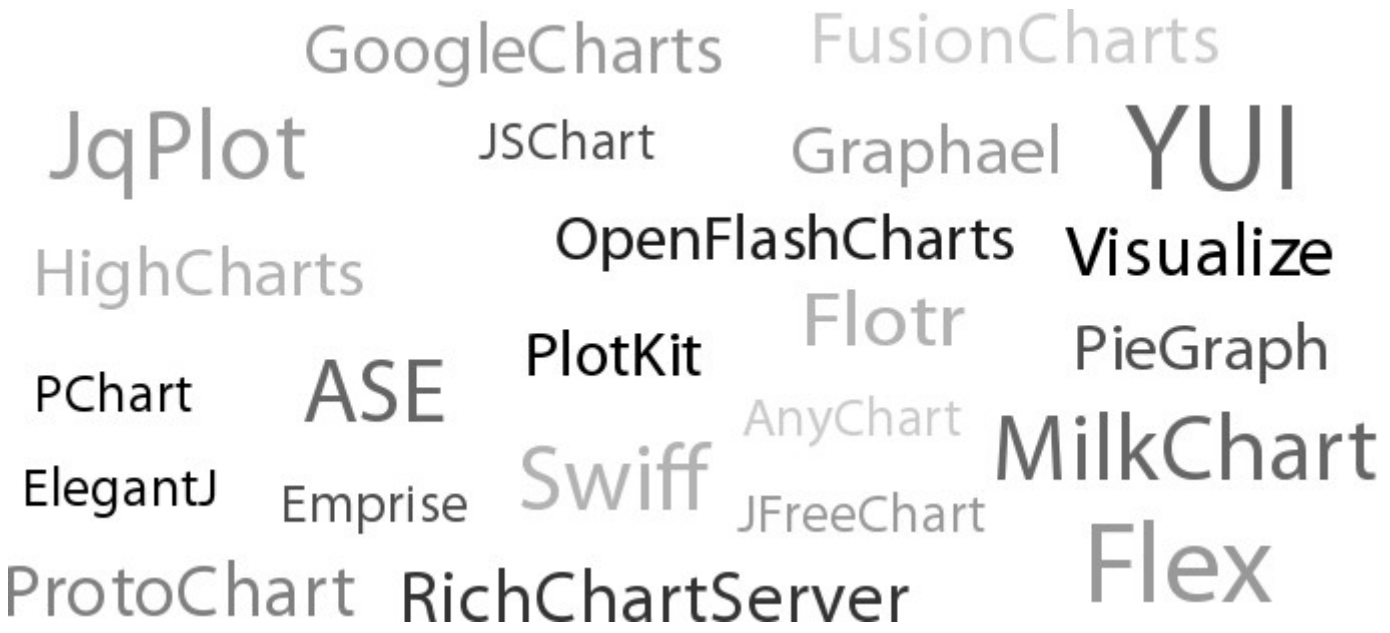
The Solution

Chartbeans Project

Pentaho initiative

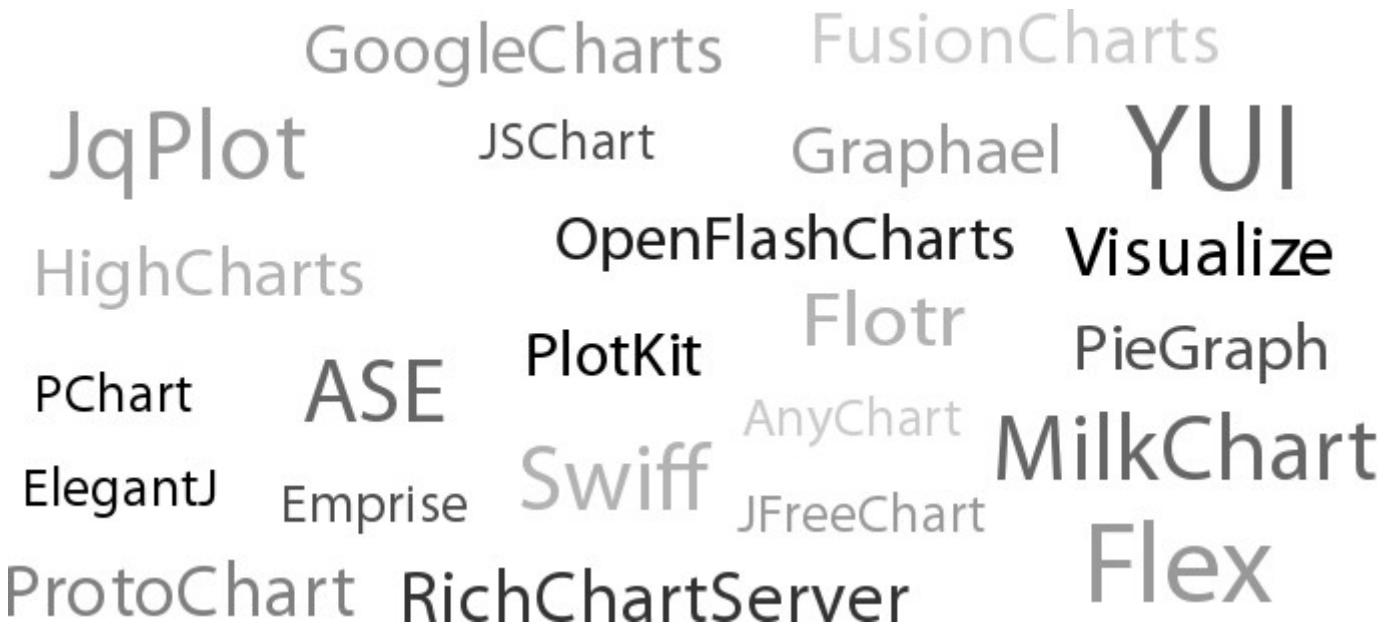
Pentaho ChartBeans is a wrapper around existing "chart engines" (such as JFreeChart and Open Flash Chart). Wrapping these chart engines creates a single way of expressing charts.

Chartbeans Project



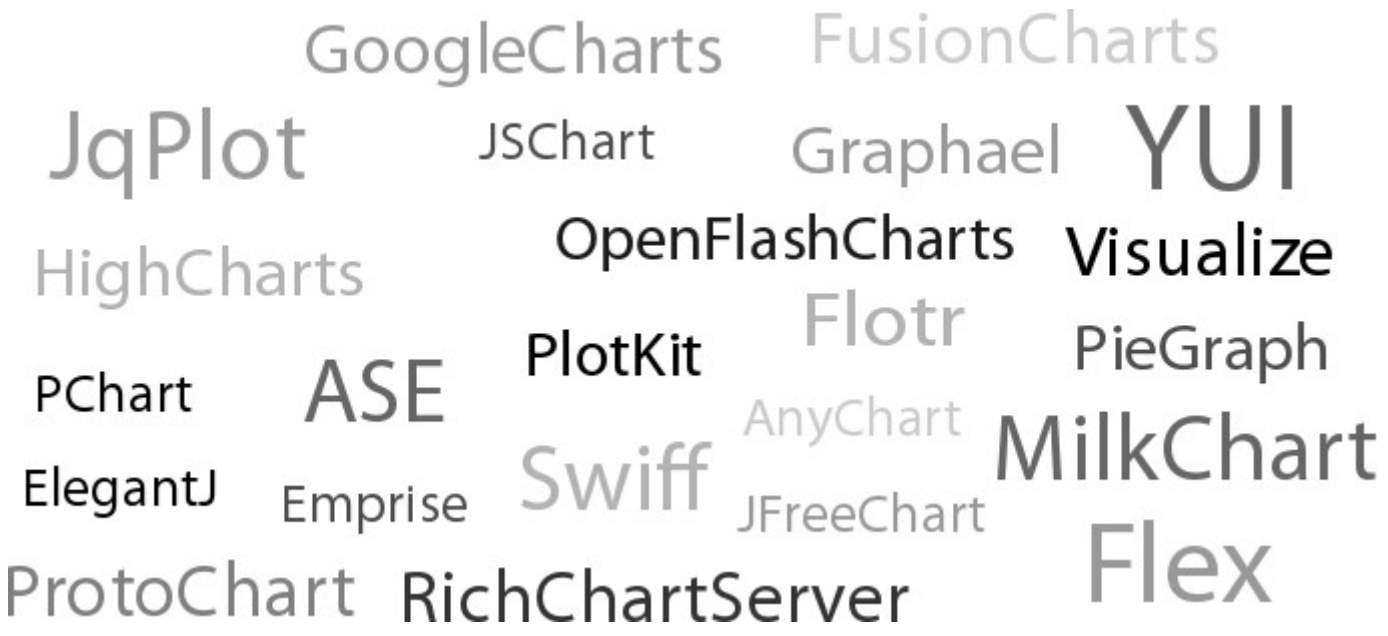
Chartbeans Project

Write a java layer



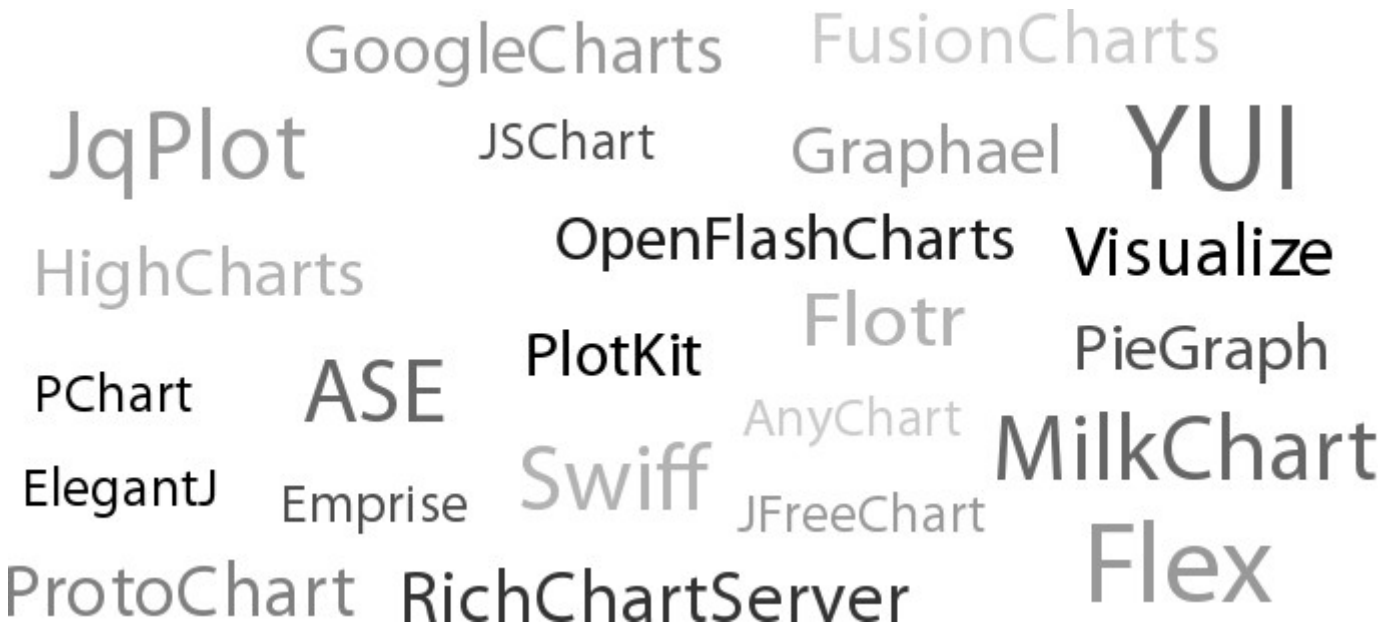
Chartbeans Project

Charting terminology
Write a java layer



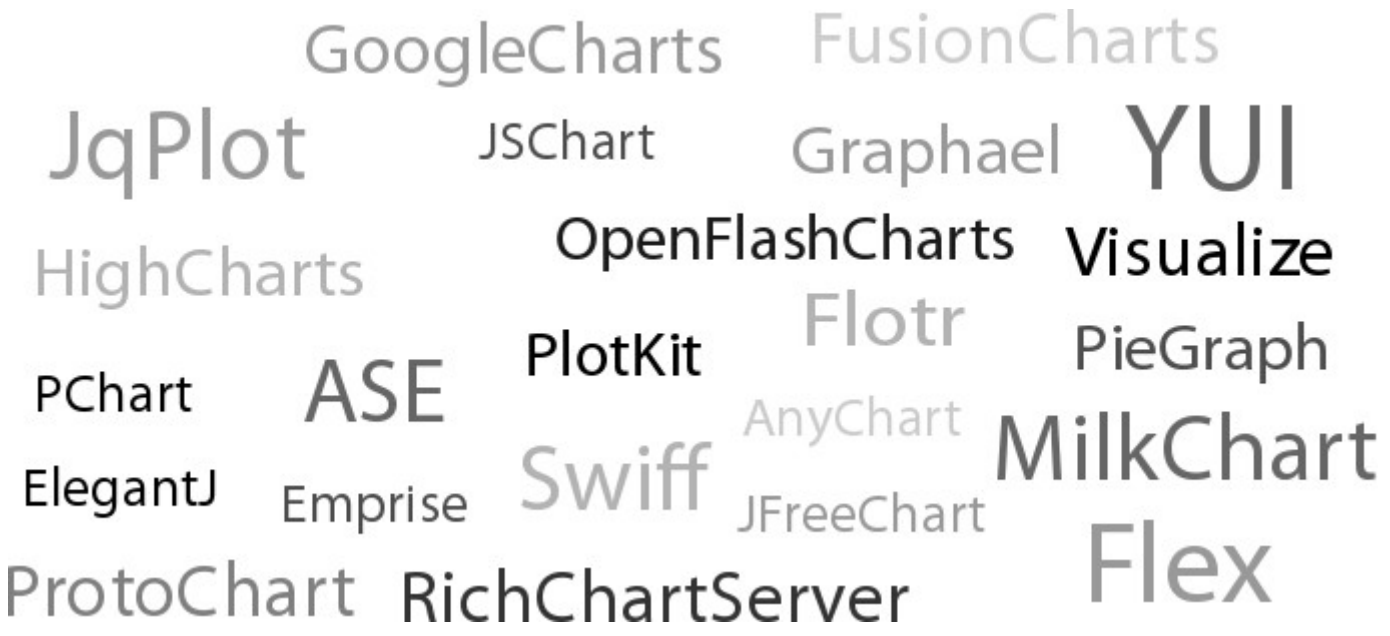
Chartbeans Project

Chart Structure: ChartDocument and ChartModel
Charting terminology
Write a java layer



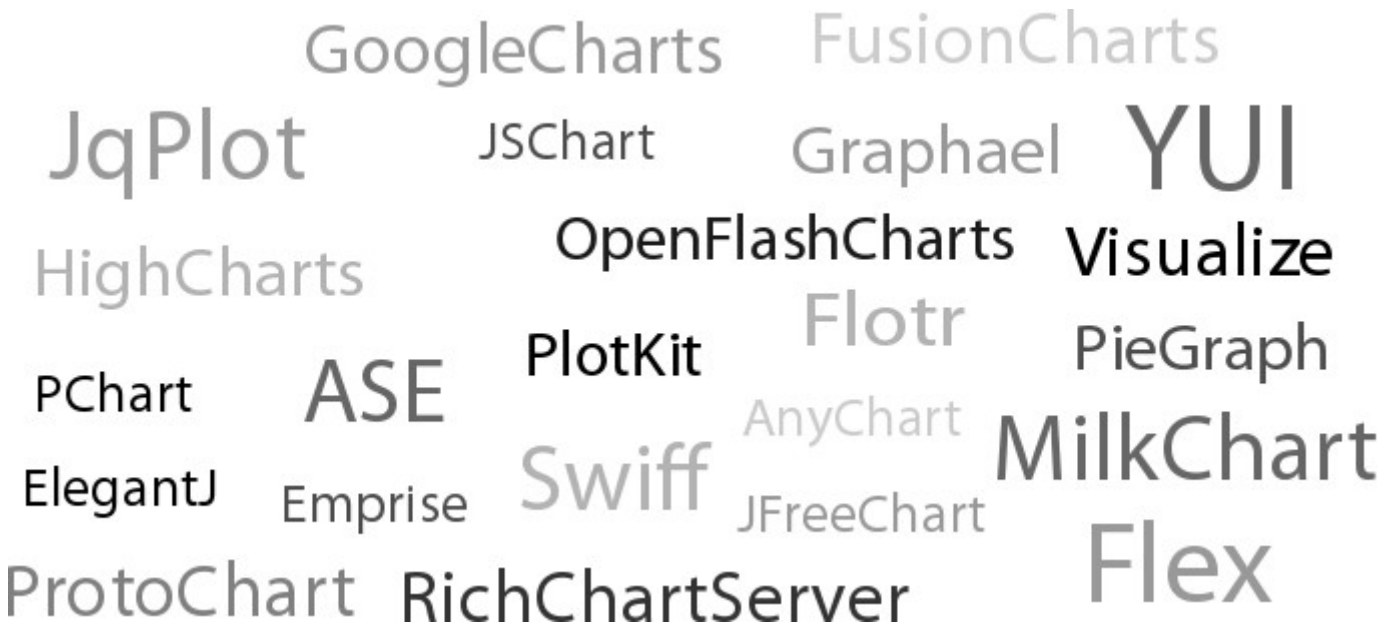
Chartbeans Project

Chart Styling: stored in ChartElement instances.
Chart Structure: ChartDocument and ChartModel
Charting terminology
Write a java layer



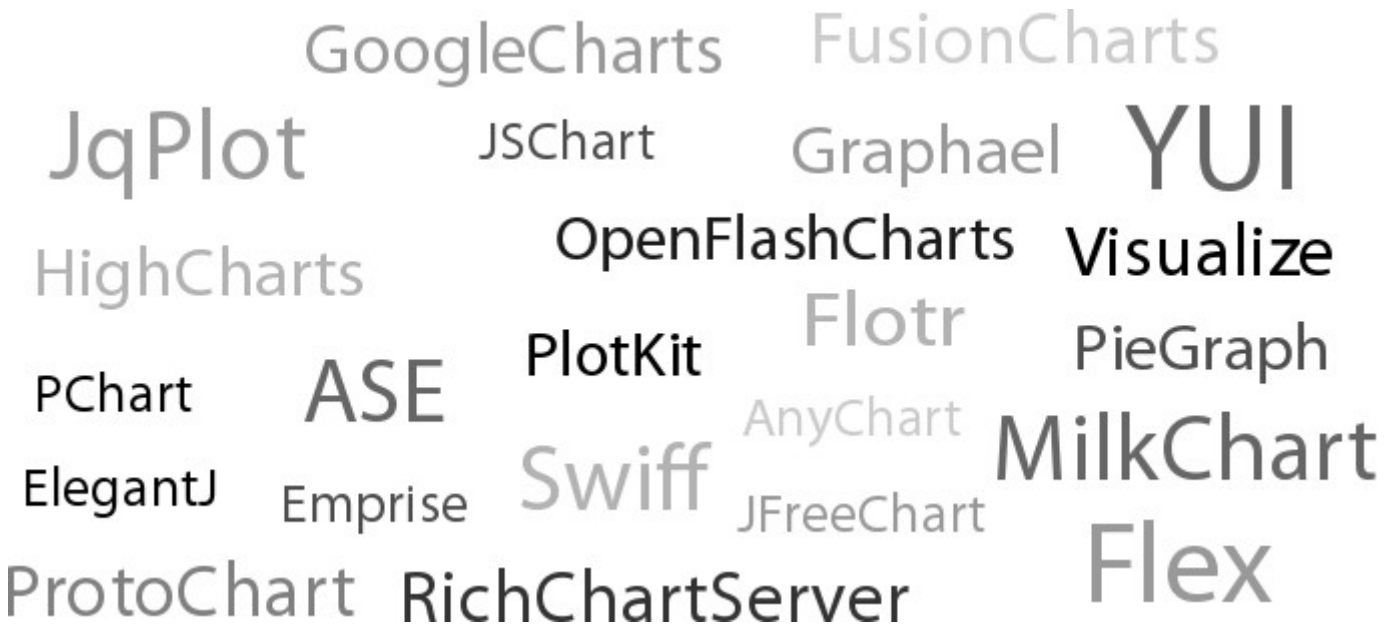
Chartbeans Project

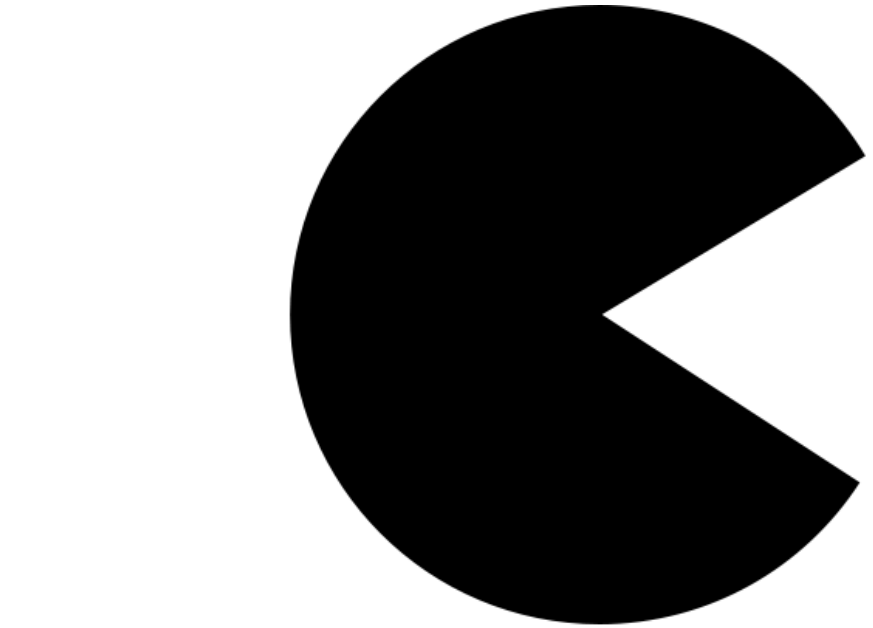
Generate a plugin
Chart Styling: stored in ChartElement instances.
Chart Structure: ChartDocument and ChartModel
Charting terminology
Write a java layer



Chartbeans Project

Call an xaction
Generate a plugin
Chart Styling: stored in ChartElement instances.
Chart Structure: ChartDocument and ChartModel
Charting terminology
Write a java layer





Percentage that resembles Pacman

Percentage that does not resemble Pacman

Chartbeans Project

Call an xaction

Generate a plugin

Chart Styling: store in ChartElement instances.

Chart Structure: ChartDocument and ChartModel

Charting terminology

Write a Java layer

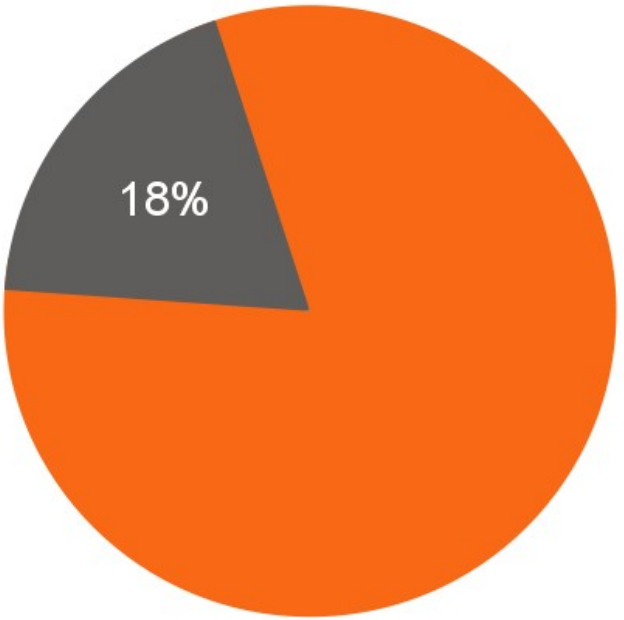
What now?

The Problem

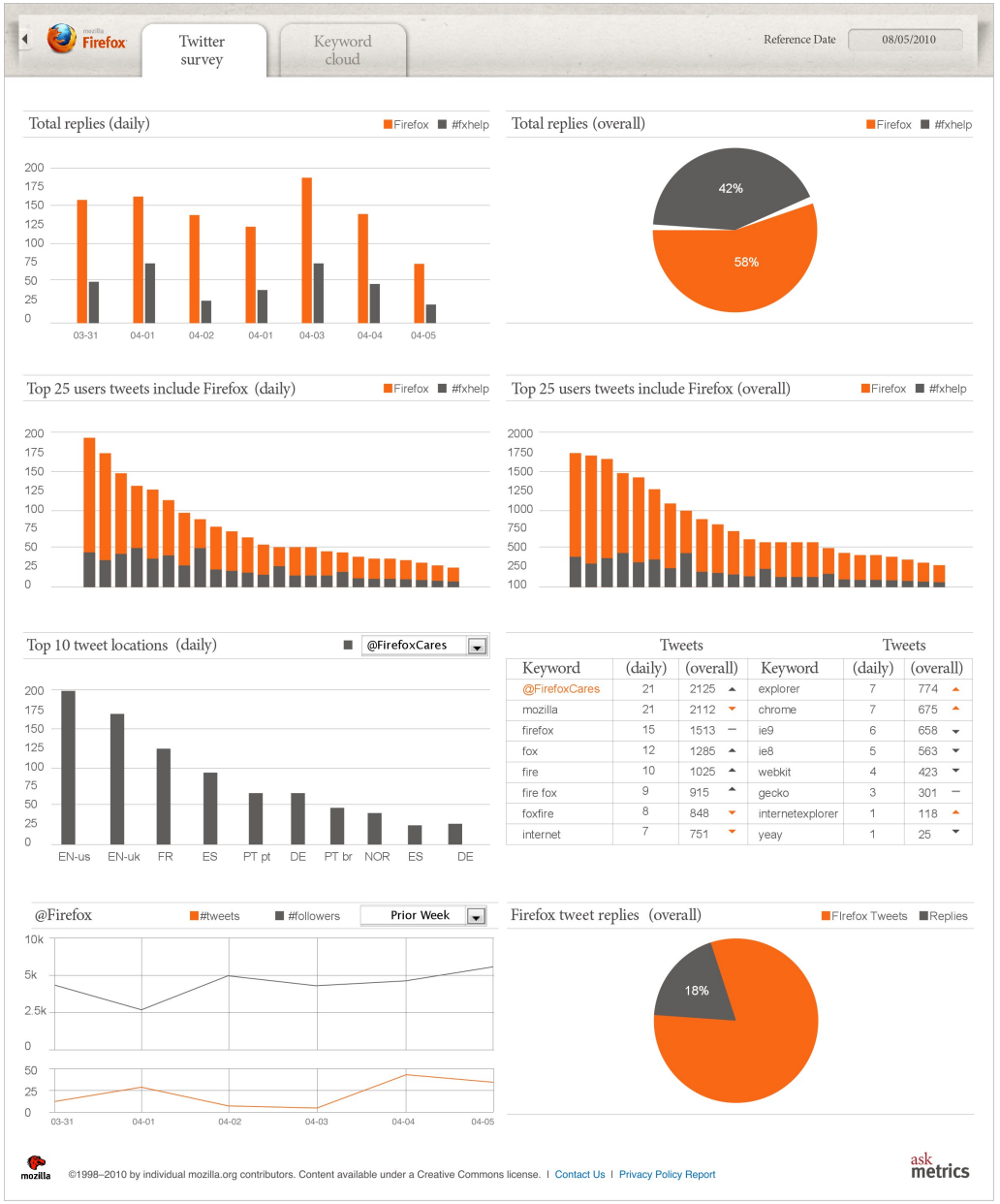
The Problem

Look at what our users need

The Problem



The Problem


Firefox
Twitter survey
Keyword cloud
Reference Date
08/05/2010
Total replies (daily)
Firefox
#fxhelp
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175
150
125
100
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50
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04-02
04-01
04-03
04-04
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Total replies (overall)
Firefox
#fxhelp
42%
58%
Top 25 users tweets include Firefox (daily)
Firefox
#fxhelp
200
175
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75
50
25
0
Top 25 users tweets include Firefox (overall)
Firefox
#fxhelp
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1250
1000
750
500
250
100
Top 10 tweet locations (daily)
@FirefoxCares
200
175
150
125
100
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0
EN-us
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FR
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NOR
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DE
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@FirefoxCares 21 2125 explorer 7 774
mozilla 21 2112 chrome 7 675
firefox 15 1513 ie9 6 658
fox 12 1285 ie8 5 563
fire 10 1025 webkit 4 423
fire fox 9 915 gecko 3 301
foxfire 8 848 internetexplorer 1 118
internet 7 751 yeay 1 25
@Firefox
#tweets
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Prior Week
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04-01
04-02
04-03
04-04
04-05
Firefox tweet replies (overall)
FIrefox Tweets
Replies
18%
mozilla
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ask metrics

The Problem

Our users need

Answers!

The Problem

Look at what we need

The Problem

We need

Flexibility!

The Answer

The Answer

We don't need a charting library

The Answer

We don't need a charting library

We need a visualization library

The Answer

We don't need a charting library

We need a visualization library

That seamlessly integrates with our tools

The Answer

Protovis

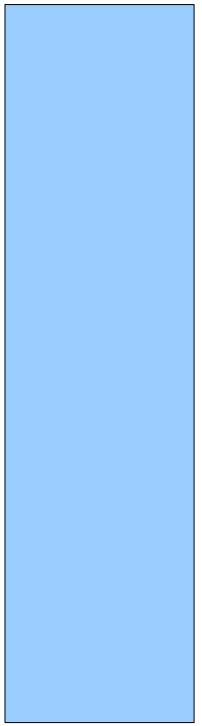
http://vis.stanford.edu/protovis/

Protovis

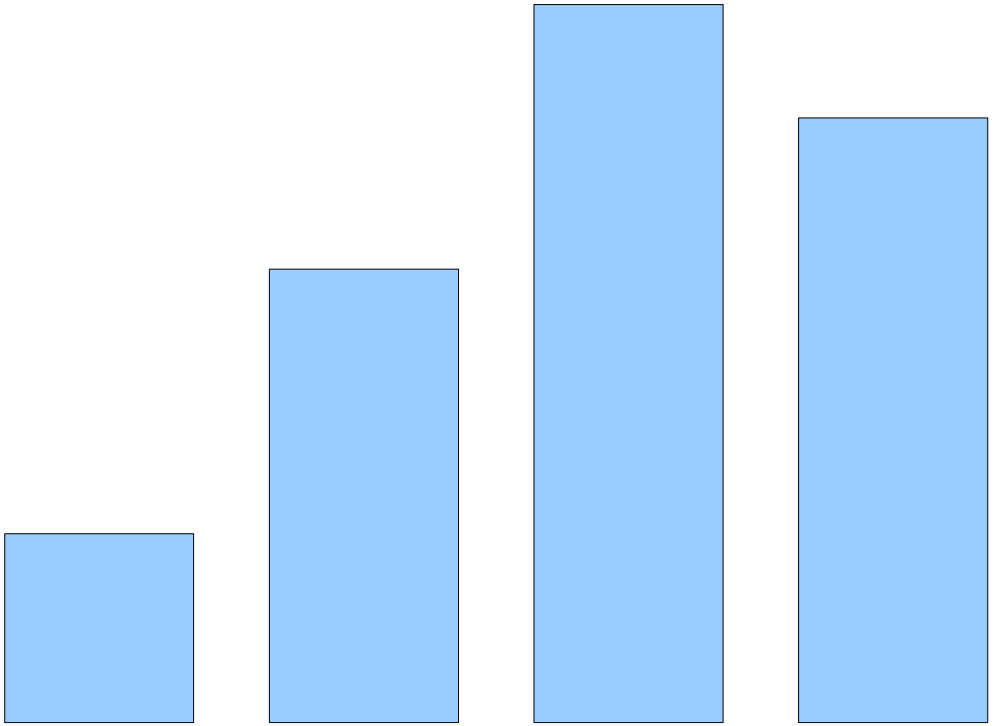
Protovis

Unlike low-level graphics libraries, Protovis defines marks through dynamic properties that encode data, allowing inheritance, scales and layouts to simplify construction.

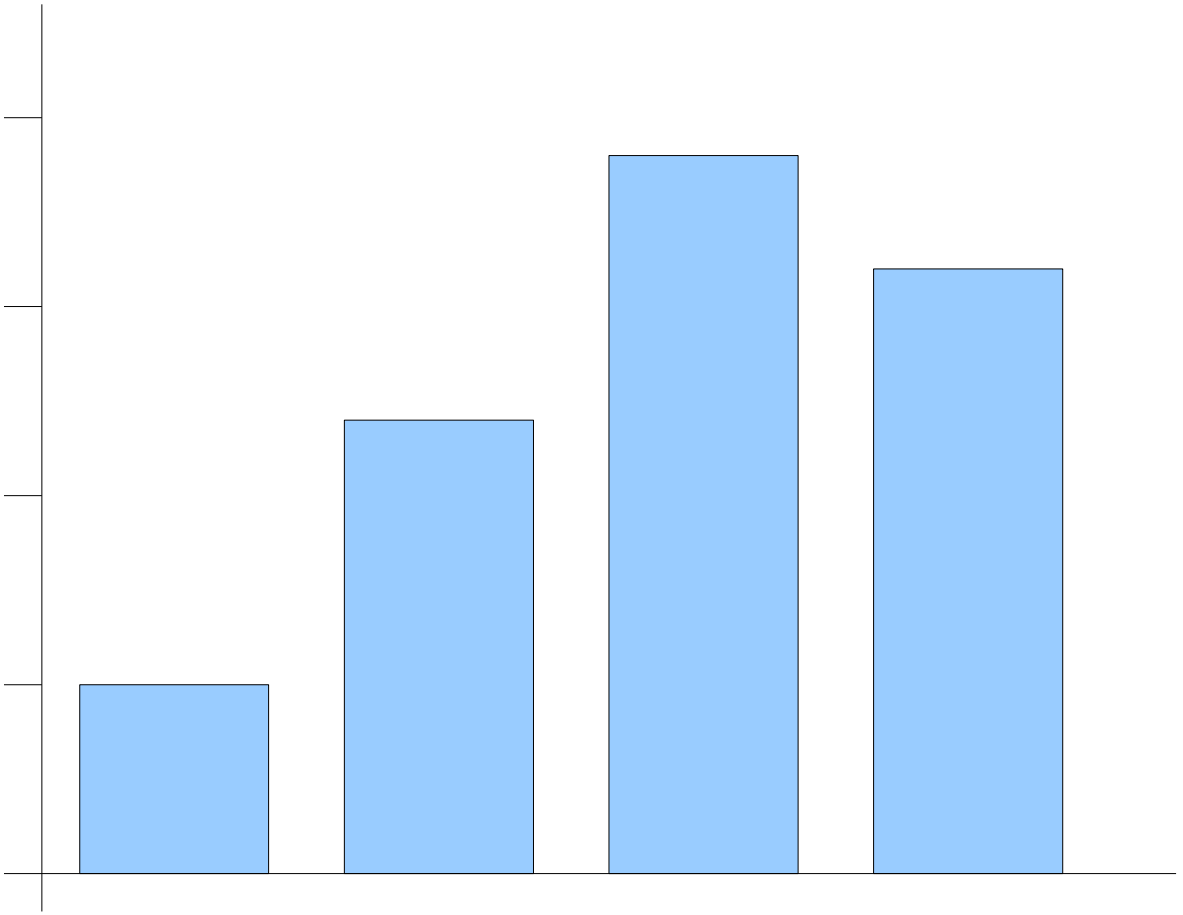
Protovis



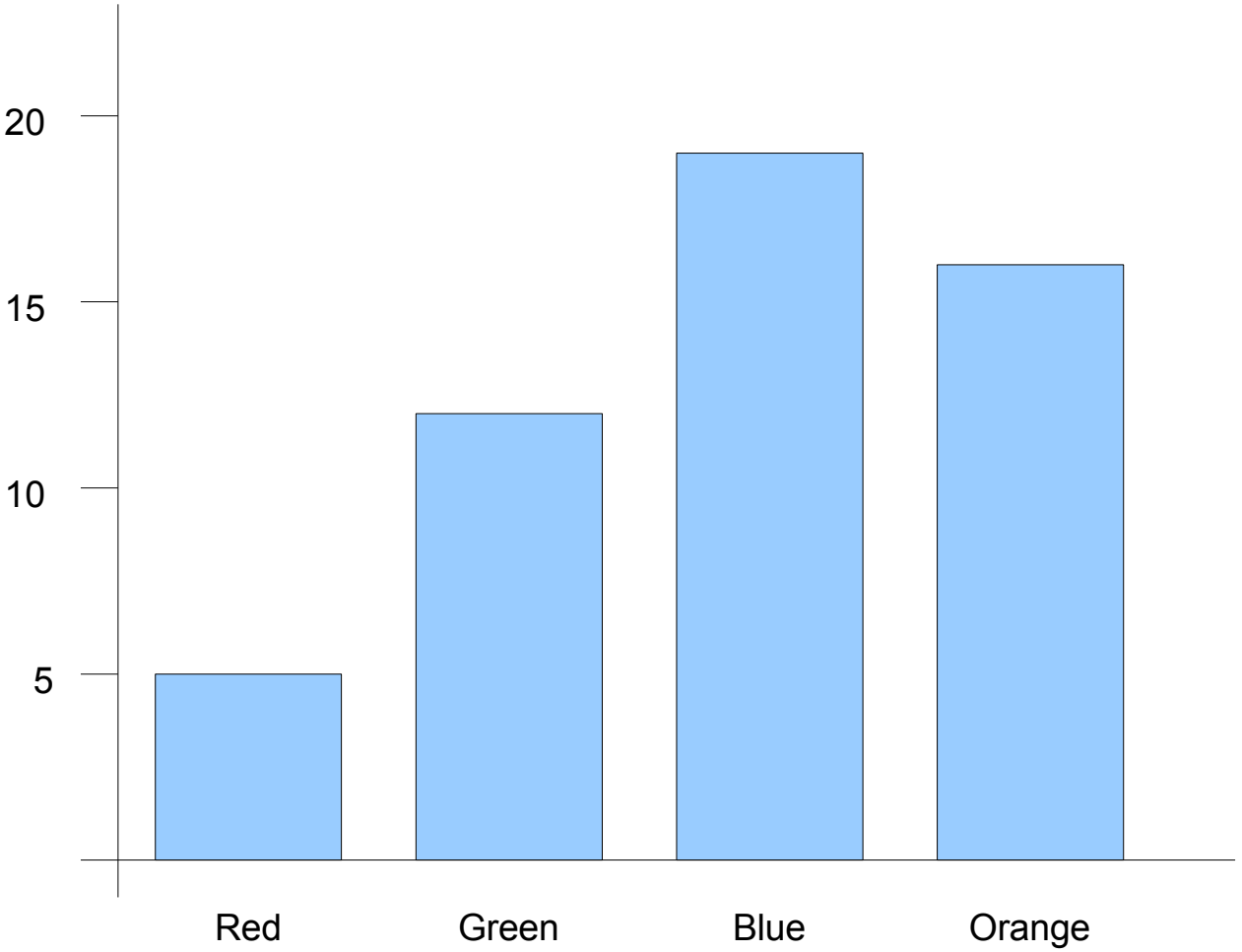
Protovis



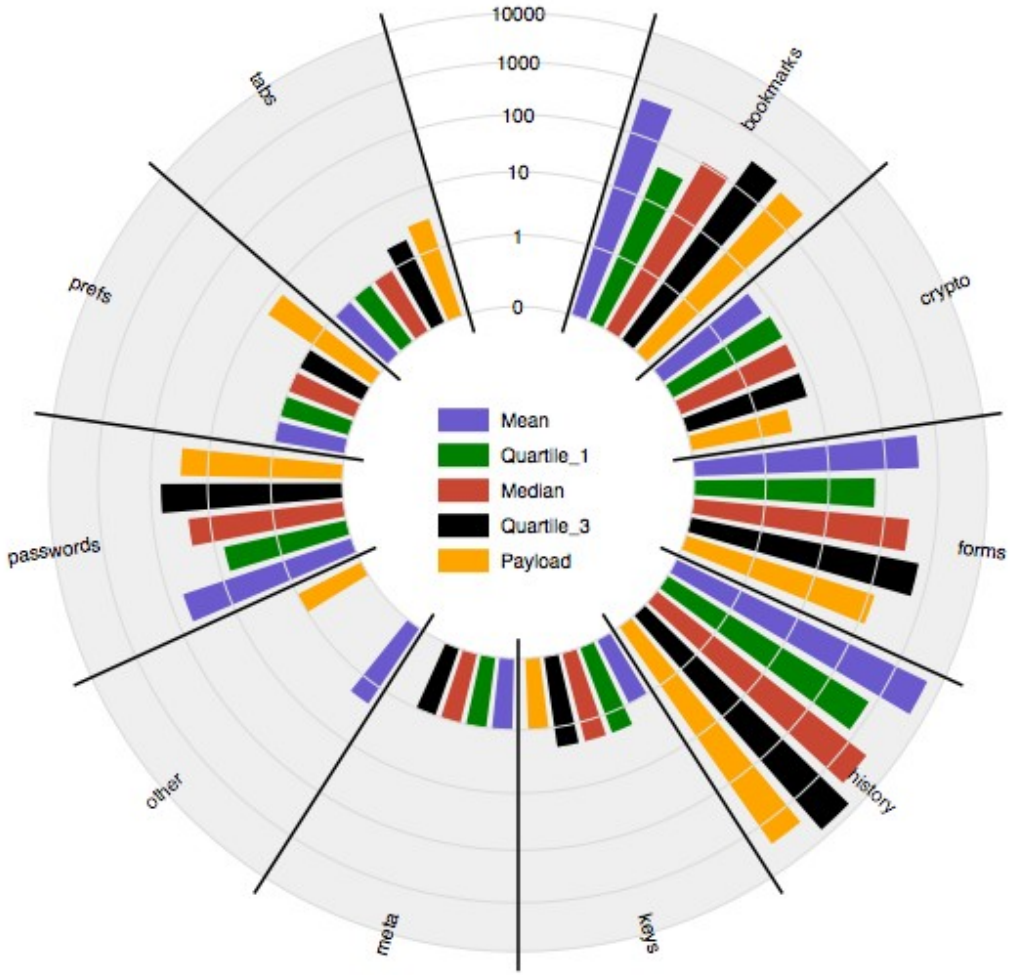
Protovis



Protovis



Protovis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bookmarks
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forms
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keys
meta
other
passwords
prefs
tabs
Mean
Quartile_1
Median
Quartile_3
Payload

Protovis

Pros:

Cons:

Protovis

Pros:

We can do whatever we want

Cons:

Protovis

Pros:

We can do whatever we want

(and we'll never want to do 3d, sorry)

Cons:

Protovis

Pros:

We can do whatever we want

(and we'll never want to do 3d, sorry)

Cons:

Requires knowledge

Can be time consuming

The Project

CCC – Community Charting Components

http://github.com/pmalves/ccc

CCC – Community Charting Components

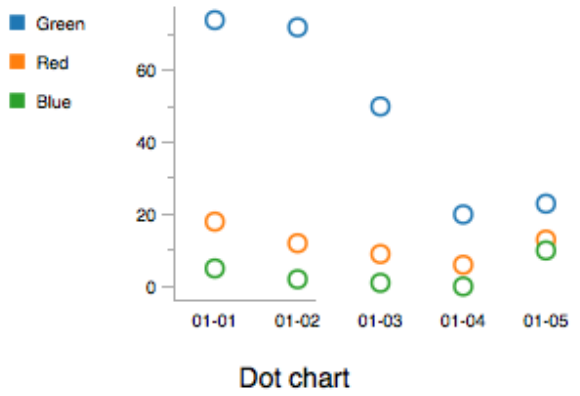
CCC is a charting library on top of protovis with the aim to provide developers with a way to include the basic chart types into a dashboard without losing the main principle: **Extensibility**

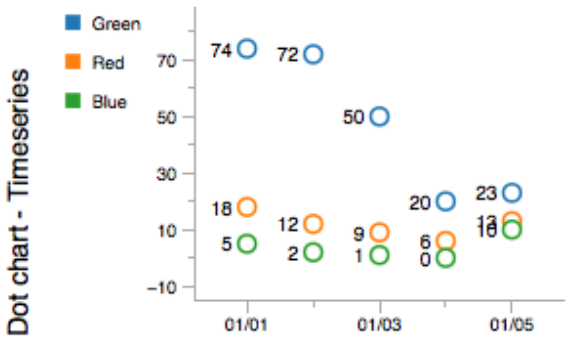
CCC – Community Charting Components

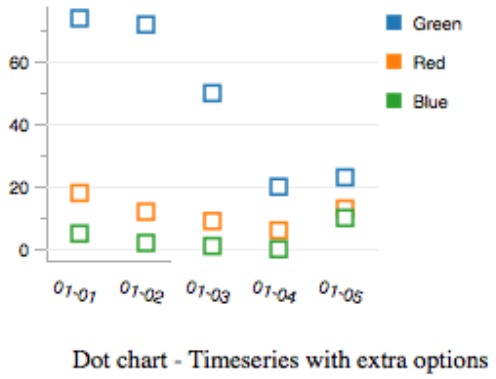
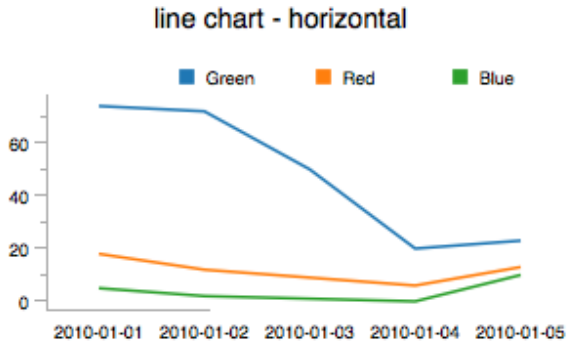
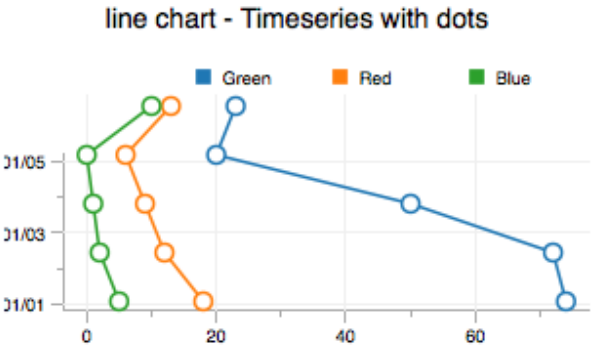
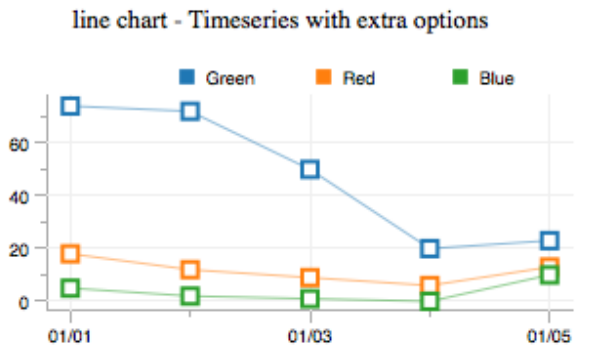
Demonstration

CCC – Community Charting Components

Dot



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