Practical QlikView 2

Beyond Basic QlikView

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Introduction

"Knowledge isn't power until it is applied." – Dale Carnegie

This book is aimed at those of you who have at least 3-6 months experience of creating QlikView documents and would like to gain a better understanding of some of the more advanced aspects of QlikView development.

If you have already worked through the book 'Practical QlikView' you should be ready to tackle the topics covered in this book.

A brief overview of the different sections contained within this book :

Section 1: User Interface

This Section contains chapters relating to building the qlikview user interface.

Chapter 1 - QlikView Design
This chapter will cover various design tips and techniques that can be used when developing your qlikview documents.

For example how to keep your documents looking consistent, where is the best place to position sheet objects like logos and the current selections box.

Chapter 2 - Advanced Sheet Objects
In this chapter we will explore sheet objects in more detail especially the chart object.

We will cover various examples including how to create dynamic charts, custom chart formatting and creating links to documents from within your chart object.

We will conclude this chapter with a simple introduction to QlikView Extensions.

Chapter 3 - Create your own extension
In the final chapter of this section we will cover the various files used to create your own qlikview extension using one of the sample QlikView extensions as a starting point.

We will cover various options you can use when creating your qlikview extension.

Creating a qlikview extension can include topics such as css, jquery and javascript that are used in normal web development. We have included urls to useful websites where you can find further information about these topics at the end of the book.

Section 2: QlikView Data

Within QlikView the data model is king.

If you get your data model right then creating the rest of the document should be relatively straightforward.

Chapter 1 - Managing the QlikView Data Model
We cover the qlikview data model, using link tables to assist in creating a cleaner data model and various types of table joins we can use in the loadscript.

Chapter 2 - QVD - QlikView Data
This is a very important topic to become familiar with when developing qlikview documents. We will cover various aspects of qvd creation including incremental qvd loads and qvd optimization.

Chapter 4 - QVX - Custom Data sources
When developing qlikview documents there may come a time when you need to access data that is not in a simple spreadsheet, database or text file.

In this chapter we will cover how you can create your own QlikView data sources called qlikview connectors using QVX and Microsoft Visual Studio Express (Free version).

Chapter 4 - Set Analysis
In this chapter we look into set analysis in more detail including examples using date fields, wildcards and the P() function.

Chapter 5 - Scripting - Techniques and Functions
This chapter covers a variety of functions and techniques including alternate states, aggr and the class function.

Chapter 6 - Security – Section Access
This final chapter of the section covers various aspects of document level security.

For example, how to filter documents based on the user login and how to setup the security in the loadscript as well as how to store security settings in other data sources.

Appendices

Appendix A:QlikView Server - QlikView at Work
This appendix covers how to install and setup your qlikview server. This was not included in the main part of the book because it requires a QlikView Server license. Other topics covered include QlikView Server security, configurable ODBC and QlikView Workbench.

Appendix B: QlikView Server Tools
In this appendix we cover a couple of qlikview server tools that might prove useful.

Appendix C: Useful Websites
Finally a list of qlikview and non-qlikview websites you might find useful especially when working on the QlikView Extensions examples.

License Requirements

The examples covered here have been created using QlikView Personal Edition 11.2.

Where you require an extra license such as a QlikView server license to cover an example it will be highlighted. Because most users will not have access to such licenses unless they are working within a company that uses QlikView these examples have been placed in the appendix and are meant to demonstrate what QlikView can do if you start using it within a working environment.

Sample data and examples for use with this book can be downloaded from the following url:

http://practical-qlikview.com/Downloads.aspx

If you have any problems downloading the samples please email info@practical-qlikview.com for help or use the contact page http://practical-qlikview.com/Contact.aspx.

Section 1: QlikView User Interface

Improving the design and usability of dashboards such as QlikView documents

In my experience once you consistently use design rules in the development of your QlikView document you will find that not only will you be able to develop your QlikView documents faster but the users of your QlikView documents will be happier with your documents as they will know what to expect.

The truth of the matter is that users don't really like change. Most people can and do live with things that have been designed poorly. Part of what makes a well designed QlikView document is that users come to expect where certain elements should be such as the current selections list.

In this chapter I will describe the most important design techniques to keep in mind when creating your QlikView documents followed by some specific tips, useful tools and some examples of 'good' design.

Many of these techniques can equally be applied to other reporting software and are not unique to QlikView.

One thing to keep in mind is that good design can be quite subjective and everyone will have their own preferences. This is especially true when it comes to fonts and colours used in documents.

1. QlikView Design

Create consistency between sheets and documents

Design techniques all about creating consistency.

The ability to create consistency in your QlikView document and also between QlikView documents is extremely important.

Users do not like to figure out how to use a QlikView document because the same functions are presented differently in different documents.

Creating consistency between QlikView documents can be a challenge when there are multiple QlikView developers that each have their own preferences for the design of QlikView documents.

For example, Microsoft has a standard for developing their applications in order to create consistency between applications.

But when Microsoft changed the layout of their menu system to add the ribbon bar the change created some confusion to begin with because users found it difficult to find the same options that they used in the previous version of the application.

If you follow a set of rules when creating your QlikView documents you will find that consistency follows. How difficult it is to apply design rules will affect how long you spend on the design aspects of your QlikView development.

Creating templates the standard document layout and basic of design of objects as well as using themes can make the task of creating the initial design of QlikView documents easier.

User Interface consistency - For example keeping captions looking the same, consistent colours used.

Data model consistency – For example naming of fields especially key fields.

Give user friendly names to fields that will be used for selection in the user interface, the reason for this is that they name of the field in the data model is what will be displayed in the 'Current Selections' object.

Next are a list of techniques and options which we can use in QlikView to create consistency and also simplify the development process.

Keep the designs as simple as possible

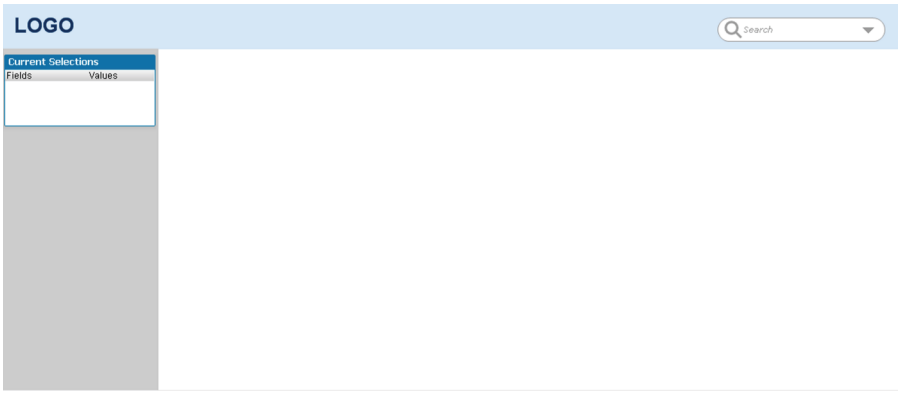
1. Try not to confuse users with chart types they are not familiar with such as radar charts.
2. Think about Colours – Do you have colour bind users?

   On the QlikView design course I attended only 1 person was concerned with colour bind users and the selection of colours for those users.

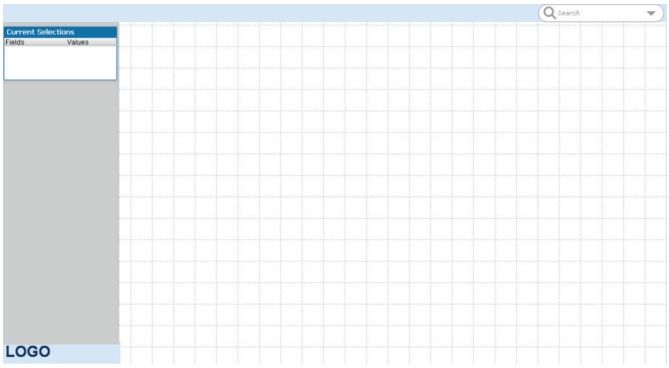
   For colour blind users - use different shades of the same colour.
3. Use muted pastally colours, use bright colours to draw attention to something like an error.

Screen Layout

1. Top left corner - place the most important object - this is most normally the current selection list. If possible try to avoid putting logos in this position as they are just distracting to the user.



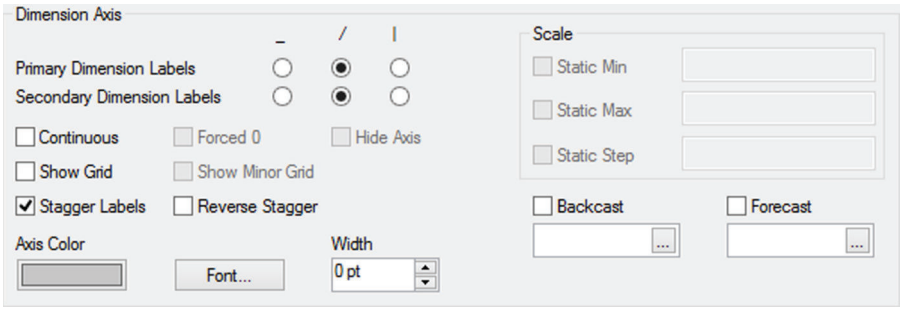
2. For example put selection lists, current selections and the search object down the left hand side of the sheet and calendar selections at the top of the sheet.
3. You can even try putting the logo in the bottom left can corner of the screen and reduce the height of the banner at the top of the screen.



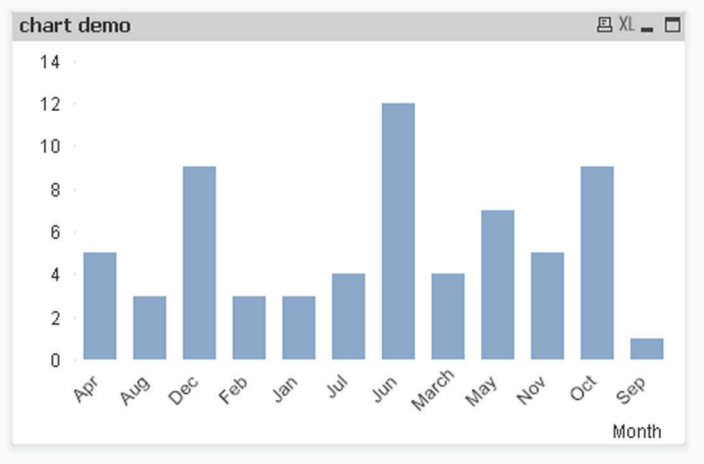
4. Give most space to most important information.
   For example try keeping charts of equal importance to the same size.

5. If the legends on the X axis are too long you might want to set the legend to a slant or changing the chart to a horizontal bar chart or using the staggered axis.

   This is done on the Axes tab of the Chart properties by selecting the 'Staggered Labels' checkbox as shown in the screenshot below:



6. An example of a chart with Staggered labels is shown here, the main advantage is that labels are more readable:



7. **Group objects**
   By using the same colour behind the objects or a border, for example creating coloured rectangle using a text object on the left hand side of the screen for selection list boxes.

8. **Put the detail on another sheet**
   Have selections and overviews of the data on one sheet with the detail level on a separate sheet. This can be a useful technique to prevent pivot tables becoming too large. Less memory will be used by the document when the sheet is not selected.

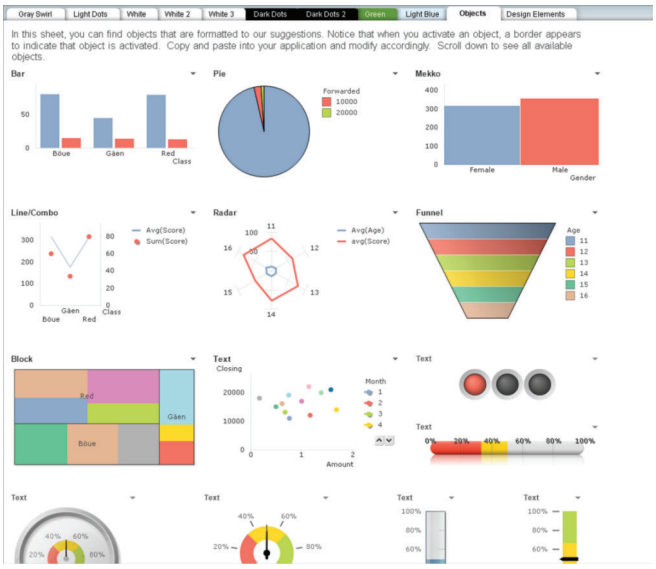
   The performance of the qlikview document can also be improved by forcing the user to make selections before for example a pivot table that is uses fields from a very large table of data is displayed. These considerations are more important when the QlikView document is used with large amounts of data and multiple users.

9. **Remove unnecessary elements**
   The might see obvious but is sometimes overlooked in an effort to try give the end user everything they might require.

Object Design

1. **Create an object design sheet**
   An object design sheet would consist of all the objects such as charts and tables setup with the default style such as colours and fonts.

2. You then copy and paste these objects when creating new documents to maintain consistency between sheets and documents.
   You can see an example of such as design sheet in the QlikView Developer Toolkit that comes with the QlikView desktop :



   To get started have a look at the QlikView Developer Toolkit which can be accessed from the Start Page when you first open QlikVIew, then select 'Getting Started, scroll down and click on the 'QlikView Developer Toolkit icon.

3. Reuse ideas from the demos on the QlikView website http://eu.demo.qlikview.com.

4. Set charts to predefined sizes.

Script Library

5. **Create a library of useful scripts.**.For example:

   - Scripts to implement incremental qvds.
   - Create a master calendar table to have common selections of dates for each sheet.

Sheet Templates

1. Create a template sheet with the main objects such as current selection, search object and logo that will be on every sheet.

   Then when creating a new sheet press CTRL+A , CTRL+C to copy all the documents from the template sheet and right click on the new sheet and select 'Paste Sheet Object as Link', this will create linked objects.

2. If you change the location of a linked object you can right click on the object, select Linked Objects, then 'Adjust Position of Linked Objects.

   This will have the effect of updating the position of all the other linked objects.

3. Keep the banner at the top of the screen as small as possible to avoid wasted space at banner 60px high might be all you really need.

4. All objects should have the same caption colour except the Current Selections box. This will mean that the current selections box will stand out more than the other objects.

5. Choose theme of colours to use 3/4 colours and no other - check company website ie: use corporate colours for caption bar - chart bars matching caption bar colour. Obviously this might not work well if the corporate colours are bright red and green.

6. Use off white background – not so bright and less tiring on the eyes if using the QlikView document for long periods of time.

7. Selection \ search left side of screen (or top right under dates).

8. Use sans serif fonts – such arial\ verdana \ tahoma\ Calibri.

9. Use same colour behind group of objects. For example to group selection objects.

10. When designing the layout of your document in QlikView know what size of screen you are developing for and resize the window using the View-Resize Window option.

    By remembering to resize the window you will avoid unnecessary horizontal\vertical scrolling.

Chart Types

Bar Charts

The most common chart type is the bar chart.

Use a single colour for the bar colour as using multi-coloured bars does not normally add anything useful.

Line Charts

Line charts are used to represent values that are changing over time for example time , date or some period of time.

For example think of computer performance data where the amount of memory used is plotted over time in the Windows Task Manager or the profits of a company might be plotted over time to see how well the company is performing.

Pie Charts\Funnel Charts

The problem with pie \ funnel chart types is that it is difficult to compare areas effectively.

If possible instead of a pie chart you could use a bar chart.

Funnel charts are commonly used for sales pipelines but can cause problems if you need to compare more than 1 funnel chart.

Useful Design Tools

For finding out which colors that go together:

http://www.colorschemer.com/colorpix_info.php

http://jiminy.medialab.sciences-po.fr/tools/palettes

https://kuler.adobe.com

An Open Source vector graphics editor – very useful for creating images:

http://inkscape.org/

Looking for different fonts:

http://www.fontsquirrel.com/

Summary

Think about the users - talk to users

Think of the end users – current and future users (and developers) - Add welcome sheet to describe the documents tabs.

Remember to add help text to objects where descriptions would be useful.
The help text field is in the properties caption tab of objects.

If possible see how the users use your QlikView documents. re: log files.

If you are using the QlikView Server you can setup audit logs in the QlikVIew Management console to discover the objects that users are actually using.

Talk to your marketing department

If you are developing QlikView documents within a company it may prove useful to talk to people in the marketing department especially the designers to find out what design guidelines the following when creating marketing documents for the company.

Also, if you can talk to web designers within the company they may be able to advise you on any company preferences for things such as fonts. So that you can create the same look and feel in your QlikView document as in other websites.