QlikView

MOBILE USER INTERFACE DESIGN BEST PRACTICES

QlikView Technical Brief
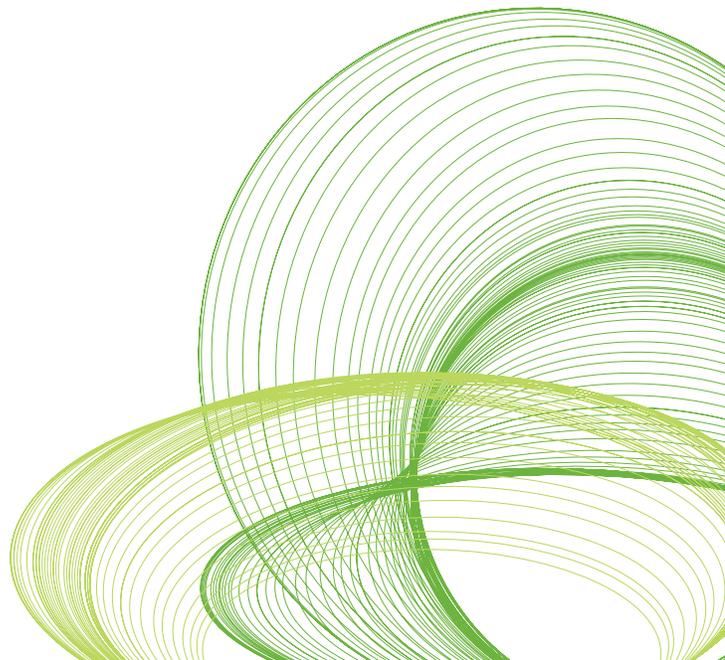
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QlikView UI design for mobile browsers

Designing user interfaces for browsers on mobile devices, even larger footprint devices such as the iPad requires a different design approach than the one that might be utilized for desktop browsers. This is due to differences in screen real estate as well as the need to incorporate touch gestures. This technical brief examines the best practices that should be adopted when designing QlikView applications for mobile tablet devices such as the iPad.

Limited Screen Space

Because of the limited real estate, it's important to decide which UI objects should be placed on any given sheet and ensure that it is really necessary that they are there.

- **Build to native iPad resolution – 980px width**

  Even though an iPad screen size is 1024 x 768 pixels, its native resolution is slightly smaller than that. It is recommended that QlikView applications are designed for 980 x 590 with a tab row, and 980 x 610 without a tab row.

  It is, of course, possible to build an application that is standard to a desktop browser, (1024 x 768, minus a navigation bar and tab rows), however it's important to consider the navigation bar and tab row that will take up more height than a regular AJAX client on a desktop browser because of the larger icons used on the iPad.

  If an application is designed for 1024px width, then the iPad will resize to fit to the screen to its width. Therefore, if zooming works with a design, it may not be necessary to create a separate design for the iPad. In this case, best practices suggest to not place an object that would shrink the height (i.e. size to data) such as a table chart, at the bottom of any given QlikView sheet.

  Depending on either portrait or landscape, you may consider how to utilize the space and test carefully with height or width of the resolution.

- **Consider portrait vs. landscape**

  Depending on the content on the screen, portrait display may be better than landscape and vice versa. Think about which display would make it easier for end-users to interact with.

  For example, if the application chiefly contains a long list of records in a table, then it may be easier to use portrait, whereas if there are visual charts such as graphs, then it may be best to consider landscape. This is because an x-axis usually is longer (wider) than y-axis.

- **Container objects**

  If many charts need to be in one sheet, utilize a container object to hold charts so that one large object can be seen at a time, rather than many smaller objects all at once.

- **Search object**

  Because of the limited screen real estate, there are a limit number of list boxes that can be placed. Use list boxes for the most frequently used fields and utilize a search object for the rest of needed fields.

- **Color usage on the same items**

  If multiple charts are sharing the same field, then use consistent colors so that one legend can refer to multiple objects to save space on each chart.

- **Graphs vs Tables**

  Be aware of too much text in charts and graphs and consider using a data table instead.

Visibility

It's natural that, because of the limited space, one may tend to make font sizes smaller to save space for more objects. However, bear in mind that it will be hard for end users to see anything if everything is small in a cramped space. Best practices define that everything should be visible and easy to navigate. Users will navigate the user interface with their fingers. That means each touch point in the UI needs to be large enough to point with a finger, not a mouse.

- **Use Arial or other font faces that are supported in iPad browser**

  For example, "Tahoma" is not supported in iPad Safari browser, and appears as "Times New Roman". Check whether the font face appears on an iPad the same as when it is on a desktop browser.

- **Font sizes - minimum 11pt**

  List boxes - Making selections within an application will be operated by touch gestures. That means if a list box contains very small font, then it will be difficult to make selections for end-users. Minimum of 11pt is strongly suggested.

  Graphs - For a legend in a graph, it's possible to use smaller font sizes (minimum 9pt suggested) because it is used as reference and not directly to interact with.

  Tables - For tables, it's recommended to use a minimum 10pt for visibility, but if the table is to be interacted very frequently, consider the same font size as list boxes.

Usability

It's important to remember that there are no mouse-pointer or right-clicks with mobile devices. Think about what is possible with only a finger touch. Everything needs to be easy to navigate and interact with.

- **Current selections**

    Always place an object to display current selections (applied filters). It could be a 'current selections box' so end users can interact with the filtered options, or it could be invoked by using the "GetCurrentSelections()" function in a text object. This tracks what filter has been applied to the data that users are looking at.

    If using a 'current selections box', then font size should be minimum 10pt to display, but to interact with it, consider it to be minimum 11pt font size.

- **Buttons for selection navigations**

    To make it obvious to end users how to interact with applied filters, utilize buttons with actions for clear, forward and back. These are three basic navigations within a QlikView application, and they are the most frequently used buttons. Even though each object could contain a menu bar to clear selections, it is easier to interact with a button to navigate on the user interface.

- **Avoid Multi-boxes**

    Multi-boxes are not recommended to be used as interaction objects for touch devices. Instead consider using search objects. A use case of multi-boxes could be to display information for a selected item. For example, a multi-box may contain address1, address2, city, state, country and zip code. In this case, when you select an account, then the multi-box displays the data nicely. It is recommended to use them for view-only use on mobile devices.

- **No mouse-over option**

    For charts and graphs, make sure that what's displayed can be interpreted by the visualization (legend, label on data points if possible) and it should not require a 'mouse over' event (as these are not possible on the iPad).

- **Special icons**

    Utilize special icons on each object. This includes "clear" for simple navigation on a list box and "menu" icon for full list of options to interact with the field.