**Database Visualiser – Iteration 2 Comments 9 August 2018**

**General comments**

New logo excellent, but have lost the ability to click to go home, which appears to have no alternative in place. I thought this was useful. Can we reinstate it?

Remove the abbreviation “(HTS)” from the heading. Window is still to be renamed to “RRI HTS Wire Critical Current Database” instead of “Visualizer”.

The new footer is great. Would look really nice with “Robinson Research Institute” on the left side. This is the branding I have been developing recently:



This is just text in Georgia font, white. If you’re interested, the “black” is RGB 29 38 36, and the green is RGB 0 71 47. You could try these.

**Dataset selection page**

Sorting is great.

The hover over the exclamation mark is good functionality. Could we slightly improve the UI? Less ‘tooltip’, more intentional UI element. Larger text, two lines. “Incompatible data file format. <newline>Click to view dataset on figshare.” Could we also italicise the entry in the list, just to provide a further visual cue of the different behaviour? I’m still hoping we’ll eventually have some way to click through to every dataset on figshare if the user desires. Suggestion: an icon in front of the title both here and on the graphical display page that links to the corresponding data set on figshare, just like clicking the incompatible data does at the moment.

Still to address: From a technical point of view, I would be interested to understand why some of the datasets are failing the compatibility check, for example the SuperOx and the Shanghai Creative. I would like to investigate this in further detail with you.

Still to address: How does this page handle many datasets? If I had 100, would they all appear in one long list, or would they be broken up into pages?

**About page**

I’ve lost access to this page now, but I like the improved cleanliness. We probably need to reinstate this in some form, I would imagine via a link in the footer. Still to address: Can I provide some final text later for this page (but I need your original text back again to base it on)?

**Graphical display page**

Still to address: I like the circle while loading, however it appears too low, it seems to me (below the bottom of the finished page). I think it would be nice to superimpose some text saying “Loading dataset” on the image, but maybe you disagree with that (too old-fashioned).

Still to address: The heading, e.g. “Critical current characterisation of Shanghai Superconductor 2G HTS superconducting wire”: I’m not sure how this is constructed, but if possible I would prefer the omission of the word superconducting. This is the S in HTS anyway. I’m half thinking it would be best just to keep the name of the dataset as displayed on the selection list since this header gets quite long. Also, if it splits over two lines, it splits in the middle of words – that’s not ideal.

Still to address: We should set a minimum width of the window. It does not work well if the window gets too narrow. Graph height calculation is not perfect; the window catches up with it. Maybe you’re leaving this until things are more finalised, but there’s some work to do on the layout. It’s less than ideal for different sizes of page.

I don’t like the excess text: “Y Axis Options” and “Variable Options”. This is just clutter; it doesn’t need to be there, it doesn’t tell the user anything useful. Likewise, we simply don’t need headings on the boxes to “Choose the Y axis” and to “Change the scale”. The user can just try it and see. It’s not dangerous, they don’t need to be carefully guided through it. Let’s just have the options. This carries through to all the others as well, and is an aspect of an intuitive UI design. I don’t want a step-by-step list of instructions; I want it to be obvious. So, concretely, instead of “Choose a dependent variable” and then a list of options, let’s just make it obvious by having the options “Temperature dependence”, “Field dependence”, “Angle dependence” (in that order if possible please, just convention), no need for a heading or instruction.

A few scientific issues: the scale options are “linear” and “logarithmic” (or “log” if that’s too long to be tidy, but I would probably prefer it in full if it can be made to fit). Linear first, please; it’s more simple. The n-value axis label should not have the text saying “(no unit)”. We cannot show a 0 on the log scale – it simply doesn’t exist. (I hope your graphing environment supports its removal…)

We may need to look at the numbering of the logarithmic scale. The numbers get too crowded. Can we just have factors of ten (i.e. 0.01, 0.1, 1, 10, 100, 1000 etc.) and omit the others. If we could retain the gridlines for the others, but not show the numbers, that would be great.

Note that there were some small display errors: the graph initially displayed was on a log scale, but the “linear” button was selected.

So this is tricky, but it would be nice: instead of the list of displayed lines in option 4, can you make it that clicking the relevant box on the legend shows/hides the dataset? … And it’s already implemented! Fantastic! Excellent work! In that case, we don’t need that section 4 at all, and I would consider displaying the legend vertically instead. (I know Excel does it that way, but every scientific graph I’ve ever seen has it vertical.)

In general your approach of showing all curves is correct, and exactly what I want to see. However, there is one exception. It’s very hard to get to the temperature dependence at zero field, and actually I think it doesn’t exist, which means your parsing of the data has missed one (call it an edge case, maybe) because this is present in the data. For this reason, it would be best if this were the graph that were shown by default on first accessing the page.

For an added challenge, you can attempt to subscript the c and italicise the I, w and n where they occur. The y-axis label should write out in full “Critical current (A)” and “Critical current per cm width (A/cm)”. This matches the x-axis, which writes out Field, Temperature, etc.

Data selection is much improved.

Still to address: At the moment, there is no data export functionality. At a bare minimum, we need a link through to the Figshare page of the relevant dataset. Ideally you would allow the export of the data from the graph, in both textual and graphical forms.

Still to address:I hesitate to suggest this, because it is easy to go too far in the opposite direction, but the graph seems a little faint, as evident from the screenshot above. Is it possible at least to make the numbers a little larger, similar to the dropdowns, and the main x and y axes a bit stronger?

I would like the option to toggle also the x-axis between linear and logarithmic. This is no use (and could be disabled) for angle, but is commonly used for temperature and field.

Colours of lines on the graph: pretty but hard to distinguish?

I don’t like the two grey lines at the bottom of the page (above the footer). It looks like they’re borders of something invisible and irrelevant, like a working environment or frame element or something. At least the second one.

**Attribution**

Have you considered putting a footer across all pages? This should credit yourselves with the work, while copyrighting it to us, and perhaps contain other information about the licensing of the datasets. If we had a placeholder here, I could come up with some content. Have you considered how you would like to be credited in such a way that benefits your future career, i.e. a link or some contact details, or at least a statement of your names so that when you point future employers to this as an example of your work, they can verify that you were involved?

**Mobile compatibility**

I worked through it on desktop this time (although occasionally resizing my window). I’ll try it out on mobile at a future iteration.

**Queries / Discussion points**

Is the style of the website contained in a simple stylesheet or other easily editable form? For example, if I wanted to change the green colour of the header bar, how easy would that be to do?

**Additional features**

I want the graph to look good when printed out (browser print command ideally).

Data export features – copy graph to word document, access actual data files. Right click, copy image doesn’t work as is.

Metrics.

Admin options: flag to hide incompatible datasets, way to edit stylesheet?

Fit curves instead of point joining (I expect this to be deferred to a future project).