BUSII

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1 Implementation Progress

The static functionalities of the dashboard have been partially implemented. The only main view that is still missing is the 3D scatterplot, but it will soon follow, as well as the navigational parts, i.e. the tree and the Gantt chart.

The implementation currently consists of the time series charts for load, torque and axis speeds, an activity chart and a tabbed chart showing tool information and the feed rate overrides.

Figure 1 shows the current state. Everything is still subject to change, especially the colors.

2 Future Work

The next steps are implementing the scatterplot and adding interaction patterns. The interactive elements will be brushing over various time axes and stepping through time using the controls at the bottom. The necessary plumbing for orchestrating these interactions are already in place such that adding these interactions will hopefully be rather easy and quick.

For the scatterplot we are still undecided between two possible 3D libraries to be used in conjunction with D3. One is D3-3D, which uses traditional SVG and projects the data down to a two dimensional space, and the other is X3DOM which uses WebGL behind the scenes and also supports most DOM events such as clicks and hovers, and should be more performant, however many examples look pretty ugly, e.g. due to jagged edges.
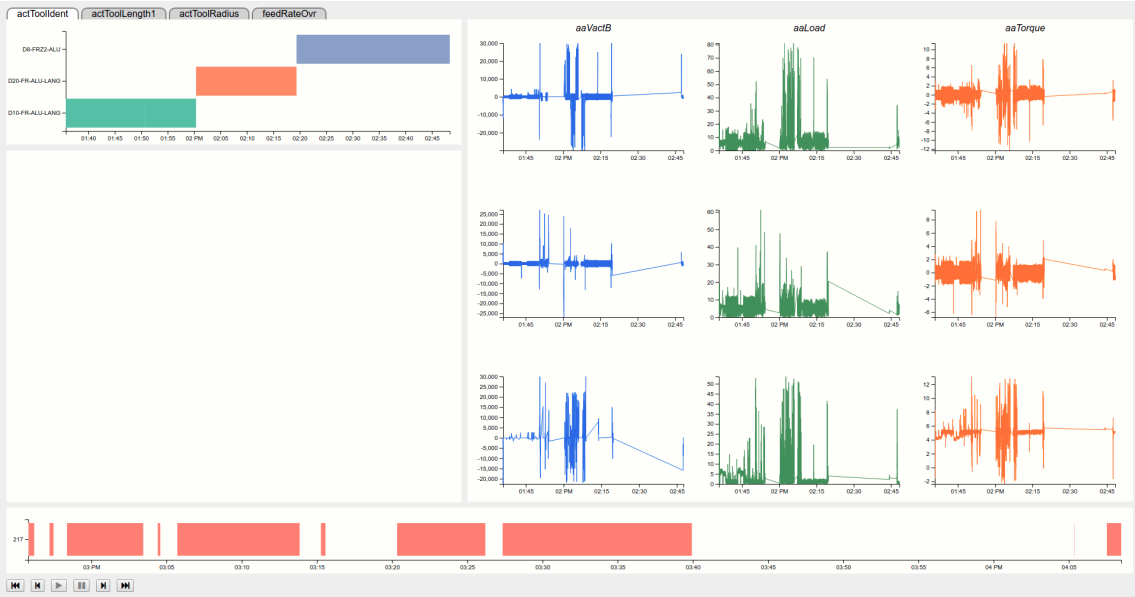
Figure 1: Screenshot