Mockup

The feedback system is intended for researchers to edit the data narratives generated by DANA. The purpose is to make it more suitable according to the researcher, prior to including it in publication or publishing on the web.

Broadly, the requirements are –

1. Create a feature in the UI for the associated researcher(s) to edit the text of the narratives.
2. This editing must conform to the overall view of the narrative (say, execution view, implementation view, software view etc). This means that the changes should not alter the focus of the particular narrative.
3. Allow editing only by the 'owners' of the workflow or people with appropriate permission. Must only be viewable by other users.
4. Edited narrative must not be inconsistent with the workflow or convey incorrect information about the computational process.
5. Must capture and store metadata such as who made the changes and when, to which narrative view, what aspect was changed etc.

Conceptually, the types of operations that could be allowed are –

1. Directly editing the text.
   The user clicks on certain parts of the text or clicks and drags cursor over portion of the text to indicate that they want to change it.
   This should be allowed only on certain parts of the text so that the overall meaning of the text is not altered.
   The system must understand what element (input/output/processing step/software etc.) is selected for editing. It should then display relevant information about the element which the user can pick and choose to include in the narrative.
   During this editing, the sentence structure must be preserved.
   If the details look too confusing, sentence break-up or formatting must be done to make it more readable.

2. Changing the setting of the abstraction.
   Instead of allowing the user to directly change the text, the system automatically generates a few narrative accounts with different levels of abstraction/specification.
   These options are displayed to the user who can choose which one to include.
   It can be thought of as increasing or decreasing the dial on abstraction.

3. Feedback system integrated with workflow visualization.
   The feedback or editing system can be done by clicking on one or more elements (the shapes representing inputs/outputs/processing steps etc) of the workflow diagram, and then selecting certain options. These options could be to add (if missing) or remove that element from the narrative, include more information about that component etc.
   This might be an easier and more intuitive way to allow editing the narrative.

Other ways to allow user interaction also need to be considered.

In all the scenarios listed above, we should ensure the following –

1. That the editing has not made the narrative inaccurate with respect to the records of the computational process, such as inaccuracies in dependencies, or the order of computations, the details of software used etc.
2. All the changes made are stored with some metadata about it.
3. The user provides additional feedback about why the changes were made. For example, they can select a number of options in a form. When a large amount of such information is available, learning algorithms might be used to automate some aspects of editing the narrative account.