Steps to create a web based Atlas.

The following numbered steps describe the major milestones in implementing a web based ATLAS.

It makes sense to complete them in the order in which they are presented.

0) Architectural decisions to be made. Implementation technology. Language, framework, hosting. Strikes me that the best way to leverage work to date is to go for something .asp based. This will enable us to use the existing core to provide the processing behind the web pages, with evolutionary modifications, rather than a ground up rewrite.

1) Database for case storage and user management.

Database will be designed based on existing data representations.

Database will be server hosted.

Existing PC based BHAView will be modified to read and write to this database instead of existing flat files. This gives us the ability to populate the database up front with real case data.

2) Implement out of box framework Web app with user management, log in, permissions, credentials management.

3) Create web interfaces to main models:

Tubing Forces

Fatigue

Hydraulics

Job planning

At this point we will be able to use the web application to deliver interactive results. i.e, users will be able to view results of models that we have run using BHAView. Users could have limited ability to edit the model. E.g, change friction factors, flow rates. Users would not be able to edit much fundamental until the following steps are completed.

4) Web interface to wellbore definition. Same functionality as app:

Quickbuild

Copy/paste columns

Edit spreadsheet.

5) Web interface to string definition.

CT Definition

BHA Definition.

6) Web interface to Fluids definition.

7) Web interface to completion definition.

8) New functionality: e.g, Prediction of BHA cooling effect. Fatigue comparison. Non Newtonian fluids.

9) Revision of existing functionality: Computing Hydraulic model before forces model, to provide better buoyancy estimate in 2 phase fluids and add fluid frictional effects on the coil.