

STRATEGIES FOR MIGRATING TO A NEW EXPERIMENT SETUP TOOL AT THE NATIONAL IGNITION FACILITY

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TUMPL05



High level requirements for a new Shot Setup Tool

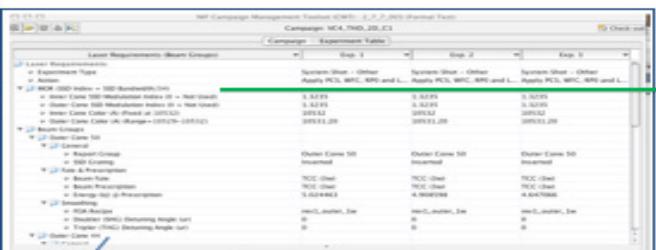
- Ensure data reuse and consistency with other User Tools
- Maintain interfaces to external systems and avoid replication
- Use rule sets to facilitate set up automation an experiment.
- Provide integrated access controls.
- Employ a data group-centric setup to enable parallel experiment edits/workflows.
- Be easier to maintain and evolve.

Minimize operational disruption while maximizing the benefits of a code rewrite

Current CMT desktop client

Migration Process

New SST web based client



1) Data group is migrated from CMT to SST with instruction to use SST going forward added

2) Data group is reworked in SST to add any new or updated requirements changes and to take advantage of updated web tools



The experiment setup is split into associated pieces of data, "Data Groups", such as the GCD Target Diagnostic setup for example

4) Existing data group is removed from monolithic experiment definition which is passed to the merge service

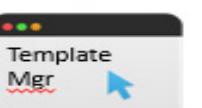
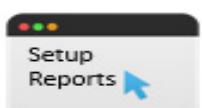
3) New data group is exported from SST to the merge service

The experiment definition is no longer written directly to database.



The new MERGE SERVICE aggregates the output of both CMT and SST and writes the resulting XML experiment definition to the database.

Downstream setup tools do not need updated unless required to do so by new requirements



Breaking the experiment definition in to groups facilitates moving from an XML based export to a table based database export in the future

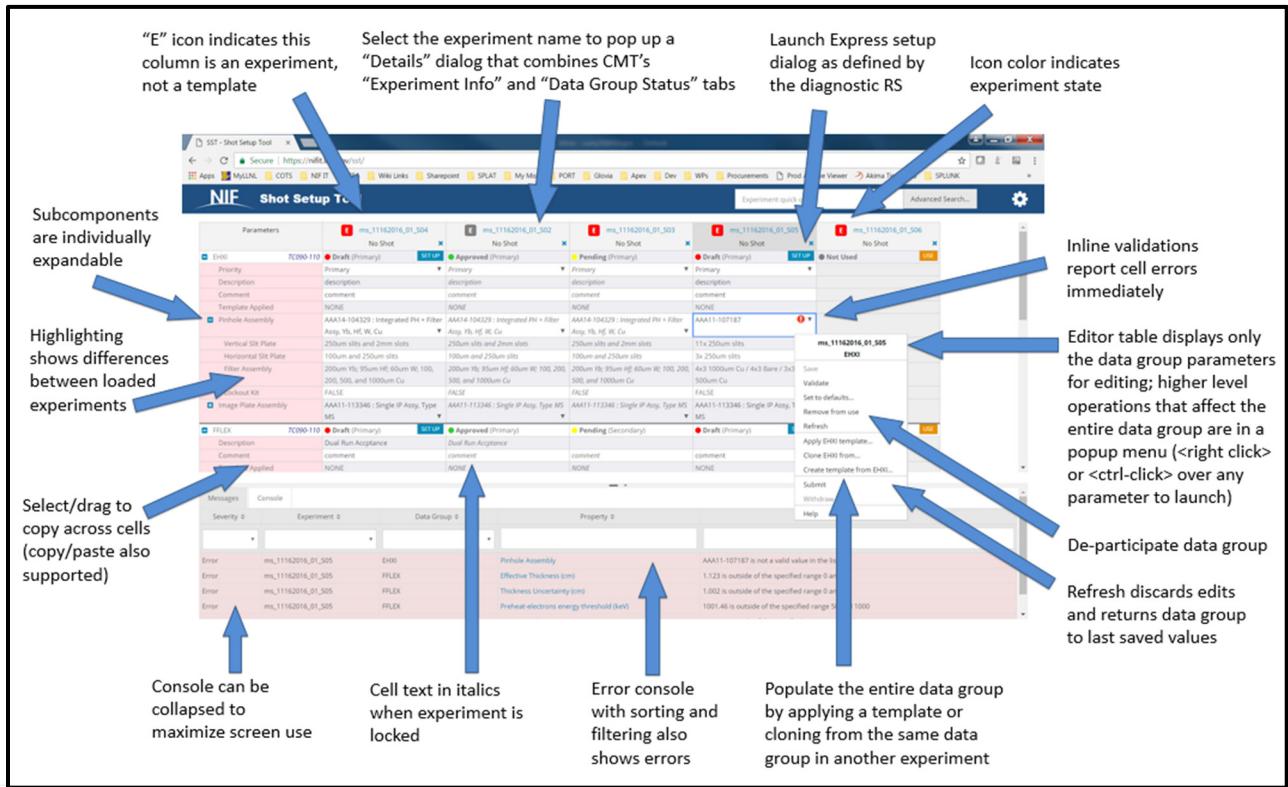
The Control system is unaware of any changes in the data model. This significantly reduces the coordination between the two development groups

Break the data model into small elements "data groups" and move them one at a time

Five successful major releases of SST have been delivered

Realized Benefits

- For users:
 - Greater satisfaction
 - Better engagement
 - Enhanced performance
 - New features
 - Training is easy
- For Developers
 - Agile Development
 - Faster feature additions
 - Use of COTS
 - Skills refresh
 - Cross training





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