

## Fusion Grid Testing Beta Release of Grid-enabled PreTRANSP Portal.

The FusionGrid Collaboratory provides easy and dynamic access to services for the general scientific and experimental communities. FusionGrid users are shielded from the implementation details such that transparency and ease-of-use are highly valued. TRANSP is a set of tools used for time dependent analysis and simulation of tokamak plasmas and is deployed on the FusionGrid. The most common use of TRANSP is to analyze the results of tokamak experiments and is used by all U.S. tokamak facilities (CMod/MIT, DIII-D/General Atomics, NSTX/PPPL). PreTRANSP is an IDL-based tool used for preparing TRANSP runs for execution on the National Fusion Grid. PreTRANSP loads UFILES into MDSplus, interfaces with the code run database, and dispatches TRANSP runs for execution on the Grid.

The PreTRANSP Portal is the first step towards the development of a comprehensive suite of grid-enabled portal tools that will provide secure access to any Fusion community member from a web browser, running on any machine. Based on the DOE/NSF OGCE software release, it utilizes FusionGrid and related grid middleware technologies including the new FusionGrid account system, the Globus Toolkit, the GridPortal Toolkit. New data collection management software has integrated the Storage Resource Broker into the MDSPlus systems. When deployed it will allow users to manage input and output files across MDSPlus and other storage devices (e.g. workstations), making data access transparent from the portal.

This project involves participation from San Diego State University (project lead), Indiana University, University of Texas at Austin, San Diego Supercomputer Center, General Atomics, and members of the newly formed DOE Portals Consortium.

