Geomechanics Director

Expedites Mechanical Earth Modeling & Decision Making

Altair’s Geomechanics Director (GeoD) allows engineers and scientists, especially in the Rock Mechanics and Geology groups at Oil and Gas companies, to build finite element models from subsurface geology quickly and efficiently. Fully integrated into HyperMesh, this user-friendly solution provides process guidance and a semi-automated approach for importing tessellated surface geology, cleaning up the model, organizing stratigraphically, assigning properties and creating boundary conditions.

In addition, the GeoD also offers a variety of post-processing tools to study near-wellbore and field wide effects for efficient recovery of hydrocarbons. The use of GeoD should help minimize the financial and environmental risks associated with Oil exploration and extraction.

The GeoD can take a 2-3 month model building process down to 3-4 weeks - increasing the productivity and efficiency of Oil & Gas companies.

Ideal for Organizations that:
Routinely conduct numerical Geomechanic simulations such as rock mechanics and Geology teams in Oil and Gas companies.
Key Features

A tailored pre & post solution for the Geomechanics community. The GeoD offers process guided workflow to start from subsurface geology and prepare the model for Numerical Geomechanics simulations. The solution also offers comprehensive set of tools for geomechanical results visualization, results mapping and 1D plots for wellbore stability issues.

Geomechanics Director Pre-processing Capabilities:
• Mesh cleanup to establish mesh connectivity
• Semi automated sidewall creation
• Organization by stratigraphic history of the given geology and fault network
• Tetmesh generation
• Materials and properties
• Contacts and constraints
• Export solver input file

Geomechanics Director Post-processing Capabilities:
• Result visualization
• Base results interpretation
• Deriving stress based metrics
• Mapping results from 3D to 2D/1D elements
• Capability to plot well stresses along measured depth
• Results export for subsequent analysis
• Result propagation and persistence through H3D files for next stage analysis

Deployment:
Altair’s team will work with you to understand your unique working practices and ensure that our Geomechanics solution meets your specific requirements.

Our experts support the following:
• Understand your current methods of mechanical earth modeling
• Align the GeoD base module accordingly
• Determine configuration needs if any for customer specific processes
• Provide quick start focused support
• Periodic checkpoint assessments to ensure a successful user experience

For more information about Geomechanics Director and other Enterprise Solutions, contact us at info@altair.com