

Providing a **bedrock** for structural geology

Advanced 3D Structural Modelling with Scenarios

4DMove is the platform for the modules 4DRestore, 4DSediment and 4DFrac, providing a modelling environment developed from 25 years of structural modelling expertise using a specifically designed workflow interface, scenario and batch modelling as well as automated display output of analyses.

4DMove, without the additional modules, provides integration, visualisation and analysis of a wide range of geological datasets. The component has been designed to complement the modelling workflows of 2DMove and 3DMove benefiting from seamless data transfer between the Move components.

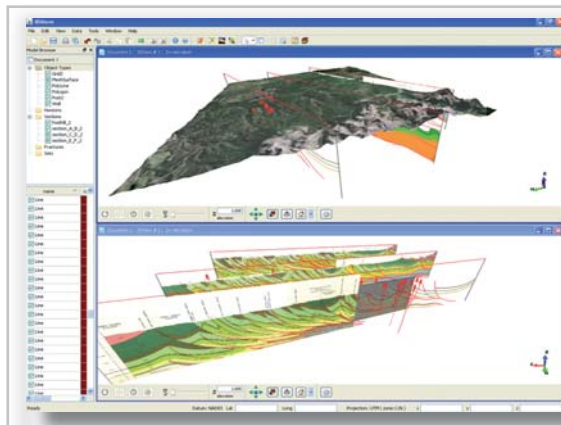
4DMove added to 2DMove creates an extended 2D modelling and analysis environment for users who are looking to integrate their 2DMove project with additional

geological data such as DEM, GIS, Geological map and Satellite data. 4DMove is the platform to combine your sections, wells and 2D SEGY with additional 3D data. In addition to data integration, users benefit from the ability to construct surfaces and extract sections back to the 2DMove project. The Statistical Curvature Analysis Tool (SCAT) compliments the section construction and update workflow.

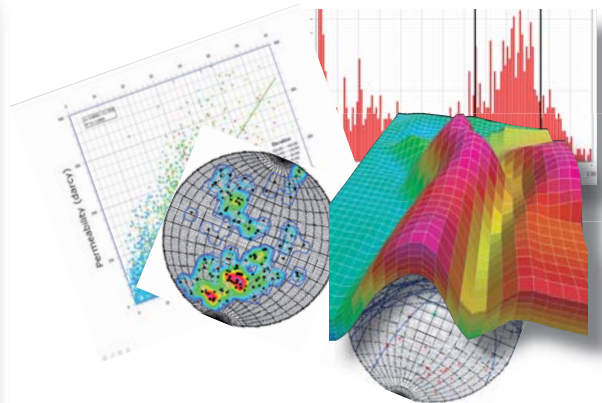
Combining 3DMove with 4DMove provides the user with proven workflows with an extended structural analysis combination. Users can combine the structural framework model with the geocellular model and GIS data. Extensive statistical attribute/property analysis and manipulation for identification of trends, populations and assessing data correlation and orientation analysis provides the necessary statistical support for high end structural systems projects such as fracture modelling studies.



Gain a better understanding of your Structural Uncertainty using 4DMove's Scenario Modelling.



2DMove project viewed in 3D (bottom), integrated with DEM and satellite image data (top).



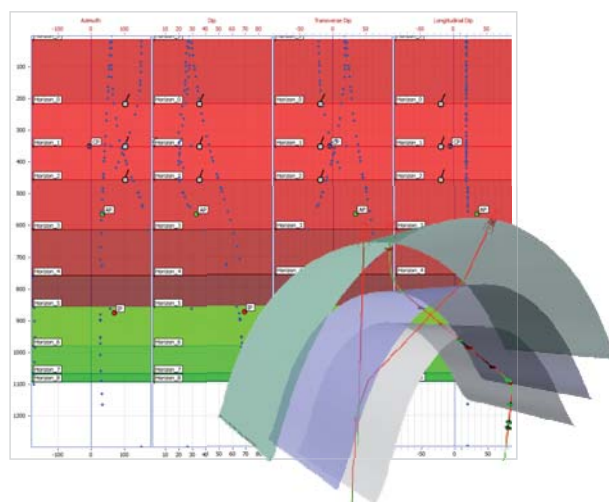
Integration of different data types - surface geology, structural framework & geocellular as well as extensive property analysis and manipulation.

Functional benefits of 4DMove

4DMove without the additional modules enables quick and simple integration and analysis of your data.

- Visualise & compare your data using extensive visualisation tools & multi document views.
- Wide-ranging data imports enabling integration of a number of diverse data types as well as generic data formats, structural framework and geocellular model formats.
- Combine your 2DMove project with DEM, GIS and image formats to create a 3D model adding 3D visualisation for data QC, 3D structural framework understanding and a regional perspective. Also Extract sections and take them back to 2DMove for modelling.
- Analyse & QC your data set in 4DMove. Extensive analysis capability (such as histograms, cross-plots, stereo-plots and SCAT) used for high end quantitative data interrogation such as isolating populations and trends as well as structural orientation analysis.
- Quickly generate a 3D model from your 2D section data using straightforward surface construction.
- Easily manage multiple data types in your 3D modelling environment using tree views.
- Convert your 2DMove project data (eg NAD 27 to NAD 83) or projection data (Lat/Long to UTM).

- **Standard desktop User Interface** with icons, shortcut keys, status bar feedback and a flexible user environment with **multiple view** and **multi document** support (3D, section and map views).
- High end **2D and 3D visualisation** including extensive display options, stereo visualisation, high resolution image support (i.e. for SEG Y and satellite images). Vertical exaggeration, visualisation of in-situ and projected wells, colour mapping and Attribute 'Z' support whereby the object attribute is viewed along the 'Z' axis.
- Seamless click-of-the-button data transfer and full compatibility of all objects from 2DMove, 3DMove and MoveViewer providing a unique **Structural Modelling Workbench**.
- **Import Wizard** for guided data integration including decimation, data preview, sub region selection and user feedback.
- Extensive **data transfer** ability with links to interpretation, geomodelling, reservoir simulation, basin modelling and GIS packages (georeferencing) as well as generic and Ascii.
- **Data management** with on-screen picking, tree view, property boxes and spreadsheets with sorting, filtering and set support.
- **2DMove section support** with 3D section and map views, linear and curved section support (including 2D SEG Y). 3D model **section extraction** and direct transfer of sections back to 2DMove for modelling.
- Basic editing, resampling and **surface construction** functionality.
- **Coordinate Conversion** (including Lat Long conversion to UTM).
- **Geocellular object** support with extensive display options including, colour mapping, property selection, slicing, 2D fence and sub-volume selection, with animation.
- **Attribute/Property Analysis and Manipulation Tool:**
 - **Manipulation** of attributes (change or generate new attributes using simple or complex operations).
 - **Multiple data views** with customised display options (spreadsheet, cross-plot, bar, histograms, rose and stereo plots).
 - **Automatic analysis** including means, max/min, P10, P50, P90, regression line and equation with 90% range.
 - **SCAT tool** with orientation plots analysis, including T&L, section orientation and structural interpretation including scenarios.
 - Extensive **dip data analysis** with contouring and advanced statistics including Mardia and Woodcock classification.
 - 3 way attribute analysis and **identification of populations and trends** with ability to create new data objects.
- **Direct output** of spreadsheet data, 3D views, maps, sections for printing or as images directly to MS Office (EMF), standard graphics or spreadsheet packages.



SCAT -tool showing the Dip Analysis Plot with a structural interpretation. Markers have been pushed back to the well in the 3D model. Close integration with 2DMove providing additional support for section construction.

How does 4DMove fit into the Move software product range and what is its major value?

Firstly, 4DMove is the platform for our geomechanical restoration, sediment and fracture modelling modules. Secondly it provides an extended workflow for 2DMove and 3DMove. 4DMove provides an affordable and flexible 3D modelling tool which performs extensive data integration, visualisation, management and high-end object analysis.

I am a 2DMove user, would 4DMove enhance my workflows and provide me with additional benefits?

Yes! The ability to easily transfer your entire 2DMove project (multiple sections, wells, SEG Y cultural data and more) provides the ability to visualise in 3D, QC across the dataset, build simple 3D models, extract sections, understand structural linkages in 3D, provide a regional perspective, integrate with additional data types and carry out further analysis such as SCAT. 4DMove is ideal for 2DMove users who are working in frontier or onshore provinces; it's comprehensive data loading capability including GIS, DEM and extensive image formats, provide an ideal 3D data integration environment.

Seamless data transfer is critical for my workflows can 4DMove provide this for me?

4DMove has direct interoperability links with 2DMove and 3DMove. For the end user, this means seamless data transfer between the Move software components. For example if you are working in 2DMove and you wish to work in 4DMove, then you are able to move your data to 4DMove by simply pressing it's icon. Integration of 3rd party or generic data within 4DMove is achieved using an import wizard. The wizard provides user guidance as well as sensible defaults for efficient data transfer.

Further information on 4DMove can be found in the software pages of our website, www.mve.com or contact help@mve.com.