

HyperGraph is part of the HyperWorks framework

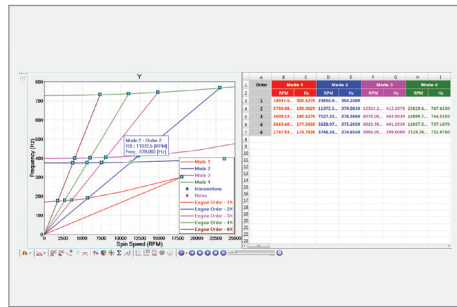
- User written math functions: Build custom math functions within the interface, register existing C and Fortran routines or use HyperGraph's interface with HyperMath to access its math functions.
- Custom pull-down and context sensitive menus: Provide easy access to reports, plot macros, Tcl/Tk utilities and 3rd party executables.
- Vertical specific user profiles for NVH, crash, forming or multi-body dynamics.

### Plot Builder And Plot Details

HyperGraph's customizable automatic plot builder generates a series of fully annotated XY plots, polar plots, bar charts and complex plots directly from engineering and test data files according to customers requirements. A wide array of formatting options allow users to specify how plotted data appears and is arranged on pages within the session. An intuitive and highly efficient interface provides browser-driven direct access to edit or modify all plot areas including axes, header, footer, legend and curve properties simultaneously for multiple plots.

### Analyzing Your Data

Create new math curves from existing data curves by writing mathematical expressions or by selecting from a library of over 200 built-in mathematical functions



Campbell Diagram in plotting client and table view

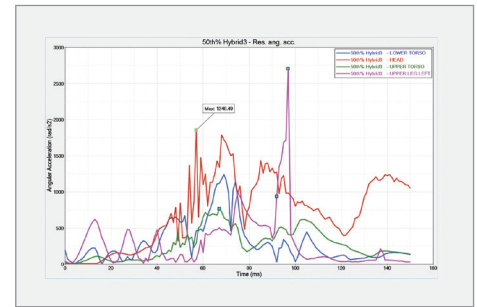
and operators. HyperGraph also contains a sophisticated math engine for performing complex mathematical operations or building custom math expressions including:

- Crash injury
- Signal processing
- Curve fitting
- Filtering
- Eigensystem analysis
- Integration and differentiation
- Statistical analysis
- User-defined math functions
- User-defined expressions

### Report Generation

Generating a standard report is made easy with HyperGraph by using the Publish PowerPoint capability along with the Report Templates functionality. The contents are synchronized between both applications, so that even individual changes in HyperView can be updated automatically in the presentation. Users have detailed control of the format and the content to export. The utility supports all common file formats for graphics and video.

- Report export: PowerPoint
- Synchronization: PowerPoint plug-in or from HyperView
- Animation export: AVI, H3D, GIF
- Image export: BMP, JPEG, PNG, TIFF
- Summary data export: Multi-column, customizable formatting

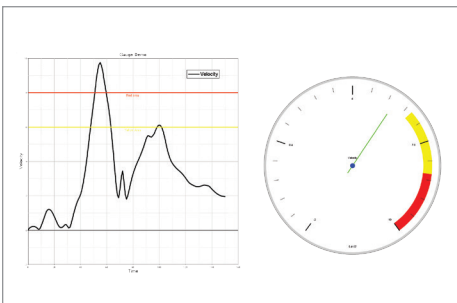


Mouse over highlighting of notes for better visibility

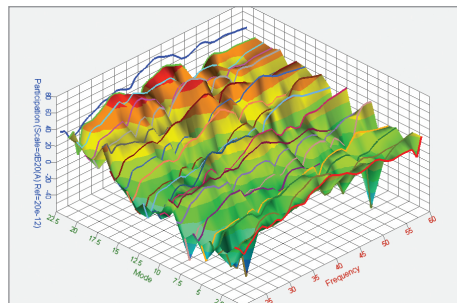
### Supported Data Formats

HyperGraph supports more than 130 data formats. The most common include:

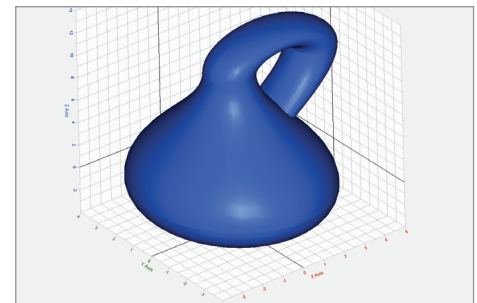
- Altair® Formats (.H3D, .abf)
- Abaqus (.odb and .dat)
- Adams
- ANSYS
- DADS
- DIAdem
- Excel (.csv)
- HDF 5.0
- ISO/ ISO-MME 13499
- ISO 6487
- LS-DYNA
- Madymo
- MotionSolve®
- Multi-column ASCII
- Nastran (.op2, .pch, .f06)
- nCode
- OptiStruct®
- PAM-CRASH (.dsy and .thp)
- RADIOSS®
- Ride data files
- RPC-3
- Universal Block 58 and XRF
- xy-data files



Animation of X-Y data as gauge



Colormap plot for Modal Participation



Bottle plot with HyperGraph 3D