

#1284: HyperGraph – Real and Imaginary Stress extraction for FRF analysis

Product: HyperGraph

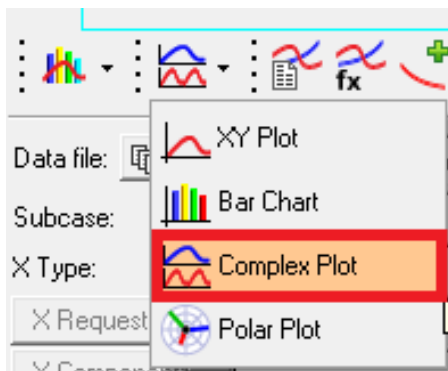
Product Version: HyperGraph 12.0 or above

Topic Objective

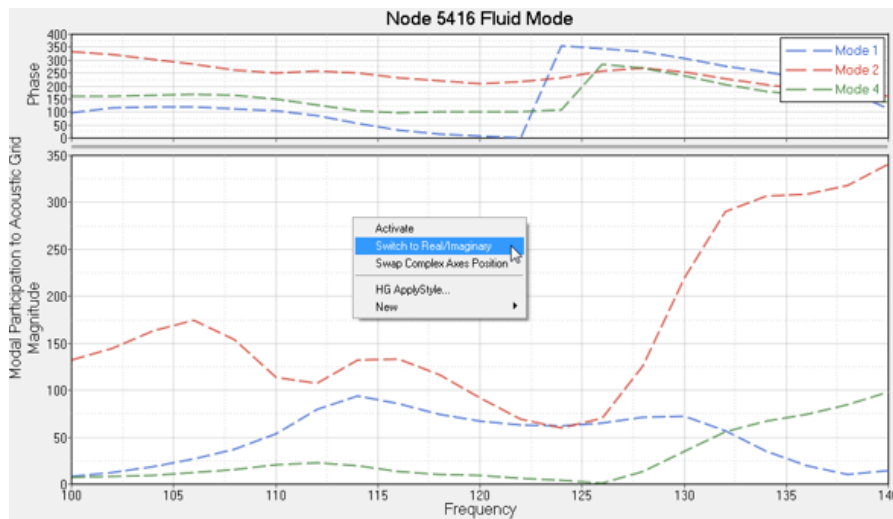
Extract the frequency response function stress values in HyperGraph.

Topic Details

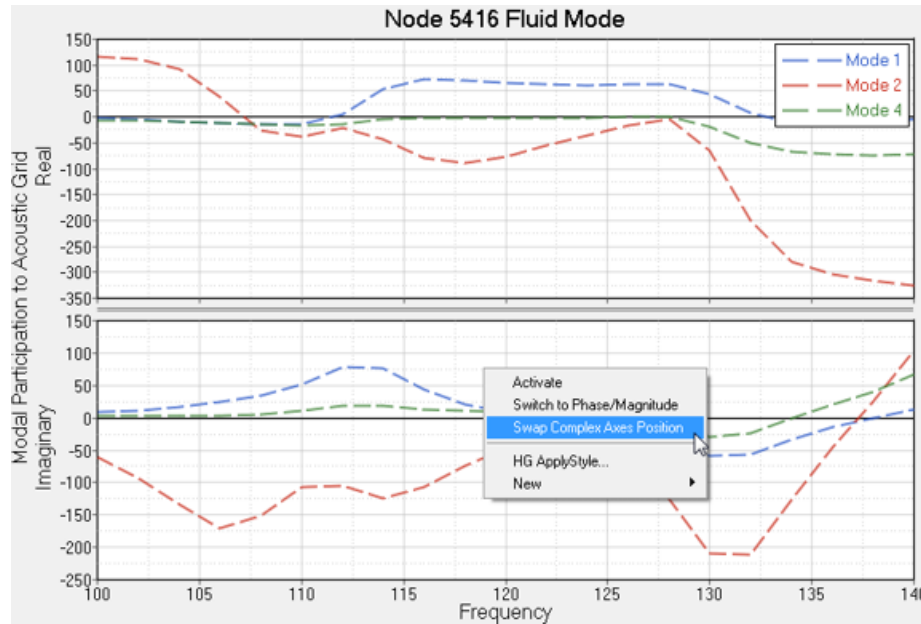
Firstly, before loading the curve in HyperGraph toggle to complex plot as shown below:



In the example below, the plot is created first and it contains phase/magnitude data.



By right clicking in the **Graphics Area** and selecting **Switch to Real/Imaginary**, the real/imaginary curves can be created. You can then switch back by selecting **Switch to Phase/Magnitude**.



Note: If you want to extract the stresses in HyperView using HV complex filter then it will not activate for Von Mises stresses.

Complex results of invariants of a vector (like magnitude of displacement) or a tensor (like von-Mises value of stress) is not a complex number. It can only be calculated at a specific angle from the response of each components at an angle.

When a complex result is loaded, HyperView will automatically switch to modal animation mode and you have options in the complex filter to choose different measures like mag, phase, real, imaginary and $\text{mag} * \cos(\omega t - \text{phase})$

