EnginSoft is a premier consulting firm in the field of Simulation Based Engineering Science (SBES) with a global presence. It was founded in 1984, but its founder and initial employees had been working in SBES since the mid ‘70s. Throughout its long history it has been at the forefront of technological innovation and remains a catalyst for change in the way SBES and CAE technologies in general are applied to solve even the most complex industrial problems with a high degree of reliability.

Today, EnginSoft is comprised of groups of highly qualified engineers, with expertise in a variety of engineering simulation technologies including FEM Analysis and CFD, working in synergic companies across the globe. We are present in Italy, France, Germany, the UK, Sweden, Turkey and the U.S.A. and have a close partnership with synergetic companies located in Greece, Spain, Israel, Portugal, Brazil, Japan and the U.S.A.

EnginSoft works across a broad range of industries that include the automotive, aerospace, defense, energy, civil engineering, consumer goods and biomechanics industries to help them get the most out of existing engineering simulation technologies.

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ENGINSOFT

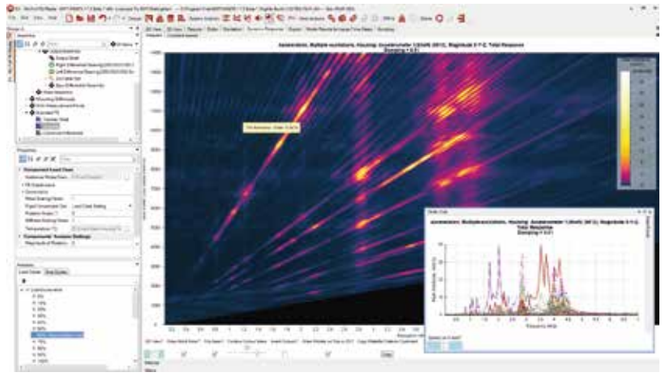
DATA SHEET

MASTA

Acoustics and Dynamics simulation

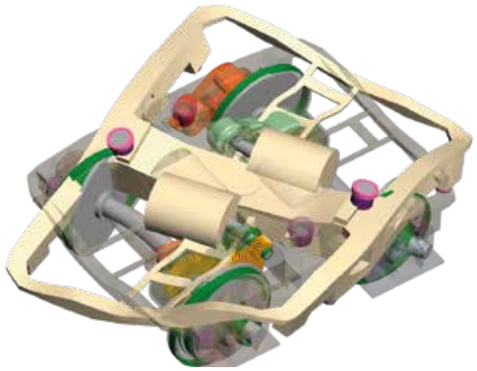
MASTA capabilities in NVH and dynamics simulation are unreached by other similar suites. The user can build the model for fatigue analyses and perform on the same system a modal analysis, a harmonic simulation by meshing forces or external excitations, whichever this is. This characteristic defines MASTA as a must to have suite to design transfer gearboxes for electrification purposes, as an example.

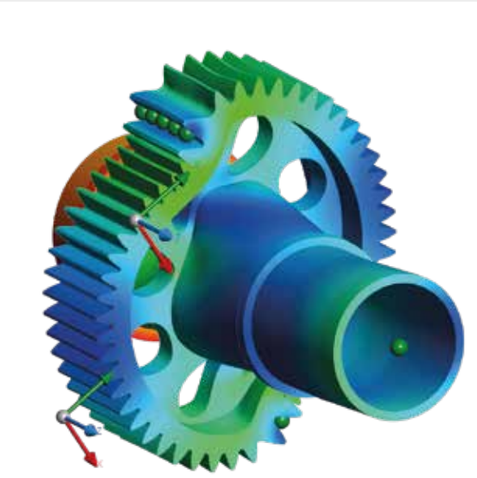
The same MASTA model can be the base for a time domain flexible components multibody analysis to analyse run-ins, clutch-ins, braking transients within a complete mechanical system. It is also possible to introduce the whole MASTA model within a Simulink block to develop and simulate the control system acting on the transmission, giving MASTA the capability to drive the simulation and optimisation of a complete power transmission mechatronic device.

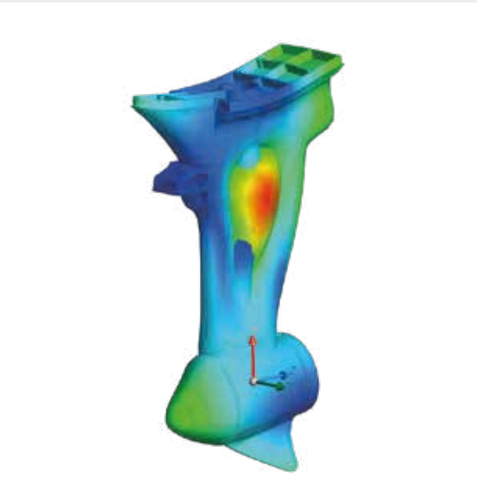


Masta is a product

SMT







Acoustics and Dynamics simulation

NVH analysis

Combine the fully detailed system model with various excitation sources to simulate transmission acoustic performance.

- ✓ Frequency domain NVH analysis produces highly detailed results with very short simulation times.
- ✓ Consider excitations from gear meshes (transmission error), electric machine and other user specified excitations.
- ✓ Rapidly perform root cause analyses on NVH problems using waterfall plots, 3D mode shape visualisation and more.
- ✓ Export excitation data from MASTA for use in acoustic software packages.
- ✓ Utilise MASTA's ability to apply high levels of modelling detail to correlate NVH simulations with actual test data.
- ✓ Transfer data from SMT's MEASA software to MASTA for even easier results correlation.

ATSAM – Advanced Time Stepping Analysis for Modulation

Further enhance NVH analysis capability with ATSAM. Assess the modulation of asymmetric shafts or planet carriers and visualise the resulting sidebands.

- ✓ Utilise MASTA's well established NVH tools to plot and analyse NVH behaviour.
- ✓ Assess fully detailed system models at different points in its rotational cycle to determine the impact of component modulation.
- ✓ Utilise MASTA's ability to apply high levels of modelling detail to correlate NVH simulations with actual test data.
- ✓ Consider excitations from gear meshes (transmission error), electric machine and other user specified excitations.

DRIVA

- ✓ Gives no need for additional, third-party products or creation of intermediate models
- ✓ Enables the full modelling and dynamic simulation of complete drivetrains
- ✓ Automatically generate models by selecting frequency ranges
- ✓ Flexible multibody dynamics approach specialised for geared mechanical systems
- ✓ Use your existing MASTA models in DRIVA
- ✓ Uses the powerful rating methods already in our market leading MASTA software
- ✓ Conduct ratings for gears, bearings and shafts against dynamic loading accurately – No other comparable solution on the market