

FEMBS – SIMPACK Interface to Finite Element Tools

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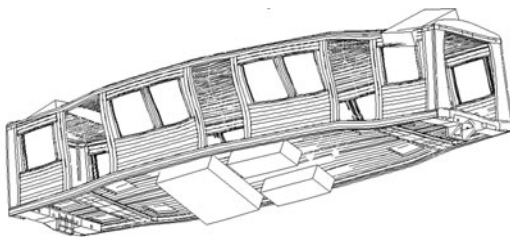
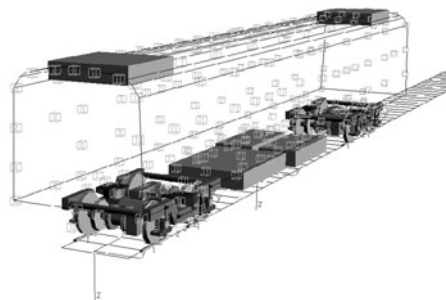


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FEMBS enables the user to incorporate Finite Element models into SIMPACK for the representation of flexible bodies in mechanical systems.

FEMBS was, in the early Nineties, the pioneer in this field and is time-tested (approved) in the field of vehicle dynamics for analysing the influence of flexibility on comfort and handling.

FEMBS supports widespread FEA-tools such as ANSYS, NASTRAN, IDEAS, PERMAS and ABAQUS.



One of the strengths of FEMBS is the straightforward modal reduction technique reducing the full size FE-model down to the modal representation required by SIMPACK. The modal representation has a reduced number of modal degrees of freedom and can be used for any type of calculation provided by SIMPACK.

Moreover, FEMBS allows the user to consider geometric stiffening effects such as the stiffening of rotating structures by means of geometric stiffness matrices.

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- any type of finite element (provided by the FE-code) may be used
- small file interfaces, even in the case of huge FE-models
- approved modal reduction technique which was specifically developed for MBS applications
- straightforward reduction process without trial and error
- accurate and efficient flexible body representation in SIMPACK
- flexible bodies can be used for any type of calculation provided by SIMPACK
- geometric stiffening by geometric stiffness matrices
- geometric non-linearities for straight beam structures (e.g. leaf spring etc. ...)

SIMPACK products

- Basic Module
Kinematics & Dynamics
- Add-on Modules
Automotive, Rail, CONTROL, USER,
Code Export, SIMBEAM, Flexbody
- Add-on Interfaces to CAD
CATIA V4, CATIA V5, Pro/ENGINEER, I-DEAS
- Add-on Interfaces to FEM
ABAQUS, ANSYS, I-DEAS, MSC.NASTRAN, PERMAS, NX-Nastran
- Add-on Interfaces CONTROL
MATLAB Simulink, AMESim

SIMPACK available operating systems

- Silicon Graphics Workstation with IRIX
- Personal Computer with Windows 2000 or Windows XP
- Hewlett Packard Workstations with HP-UX
- IBM Workstations with AIX
- Linux (Red Hat)

For further information or
an in-house demonstration
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