

CSM++ Structural Analysis

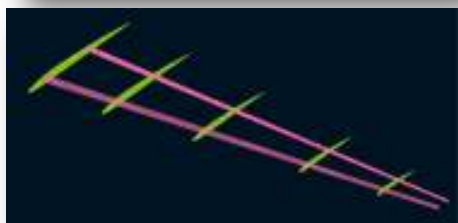
Computational Structural Mechanics Software for Fluid Structure Interaction (FSI)

CSM++ is a finite element based structural mechanics simulation software suite which has been specifically designed, from the outset, to work seamlessly with CFD++, CAA++ and MIME to carry out Multi-Physics simulations involving fluid flows, acoustics, structural deformations and heat transfer.

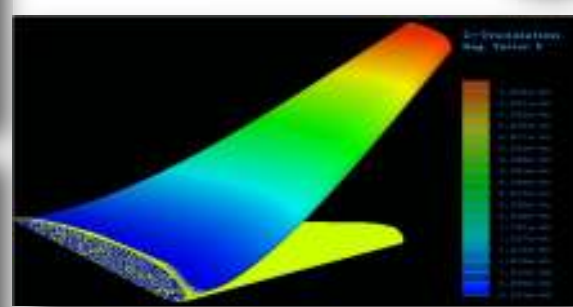
CSM++ heralds Metacomp's vision for a flow structure interaction capability with an unprecedented level of interaction between all the component disciplines.



Wing Geometry



Wing Internal Geometry

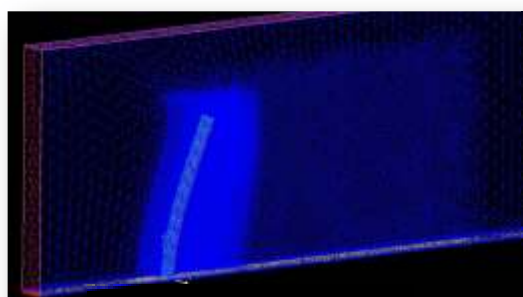


CFD++ solution with CSM++

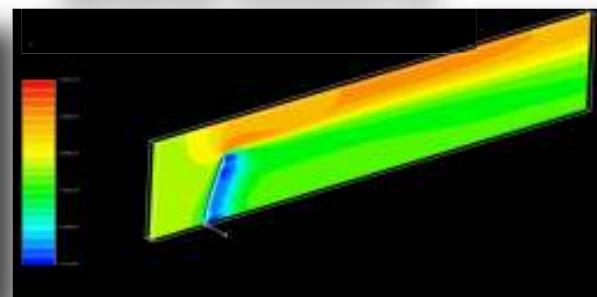
FSI

File based fully coupled runs with CFD++
Sockets based communication with CFD++ using TCP/IP

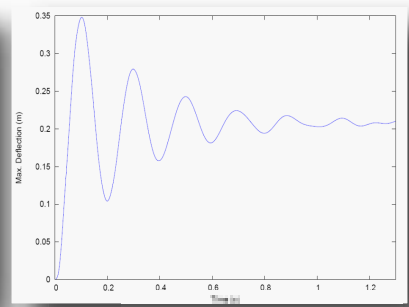
Nonlinear Transient FSI



Deformed CFD grid



CFD Solution



Tip deflection

Better product design means always looking for better methods, more efficient ways to get things done....



Left to right problem set up

Import/create mesh

Define analysis type

Specify:

Materials

Element Properties

Restraints

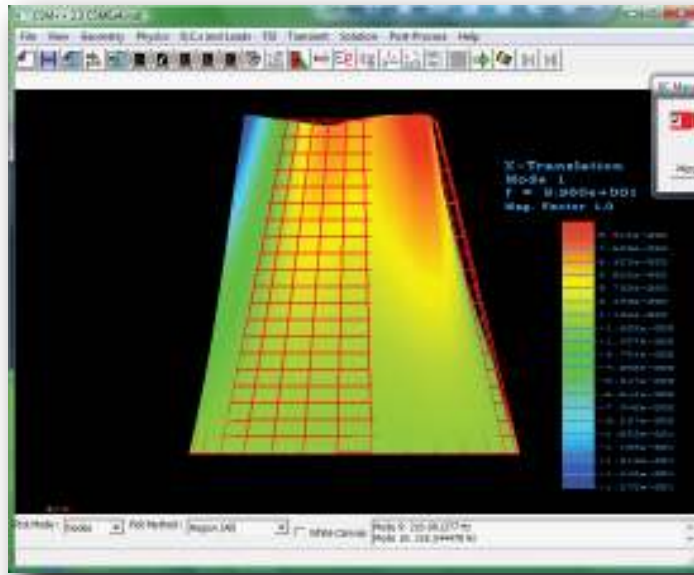
Loads

FSI options

Transient options

Solve

Post-process



Easy to select and organize geometry for structural analysis.

User interface is easy to learn and use.

CSM++ I/O Options:

3D Systems/STL File

SDRC/IDEAS Universal File

ABAQUS Input and Output Files

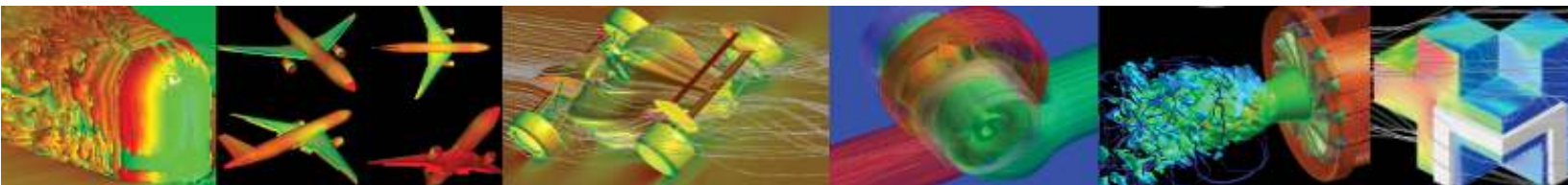
ANSYS Input and Results Files

CGNS Database

LSTC/LS-DYNA Input and State Files

NASTRAN Bulk Data and OUTPUT2 Files

Metacomp Technologies is at the forefront of cutting edge technology in Computational Fluid Dynamics (CFD), Computational Aeroacoustics, Mesh Generation, Structural Mechanics, Flow Structure Interaction and Electrostatic Paint Deposition, with its products in widespread global use.



Metacomp Technologies

Beyond Conventional Computing

www.metacomptech.com

info@metacomptech.com

