CFD + MSC Co-Simulation Engine

Co-Simulation Gets Real

Cradle
MSC Software Company

Co-Simulation

• Analysis of reed valve
scFLOW ⟷ Marc

• Release of aircraft canopy
scFLOW ⟷ scFLOW - 6DOF

Temperature   Velocity

Pressure = 0.0 [Pa]

Bed Particles

$v_0 = 0.06$ [m/s]

• Analysis of fluidized bed
scSTREAM ⟷ scSTREAM - DEM

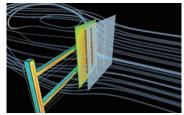• Analysis of air craft flap   **Adams ⟷ scFLOW**

• Analysis of vehicle behavior when withstanding cross-wind
scFLOW ⟷ Adams

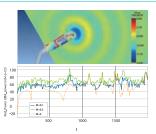• Analysis of deformation and vibration caused by wind pressure
scFLOW ⟷ Nastran / Marc

• Analysis of sedimentation behavior in a tank
scSTREAM ⟷ scSTREAM - DEM

Chained Simulation

• Analysis of exhaust noise of a motorcycle
scFLOW ➡ Actran

• Acoustic analysis of axial fan
scFLOW ➡ Actran

• Thermal stress analysis of electronic device
scFLOW ➡ Nastran

• Deformation analysis of aircraft wing
scFLOW ➡ Nastran

• Analysis of vane pump
Adams ➡ scFLOW

Inlet   Outlet
1[rps]
Stiffness coefficient: 10000[N/m]
Mesh

PART OF HEXAGON

Software Cradle