FINE MODEL CONVERGED: NO **COARSE MODEL CONVERGED: NO**	**FINE MODEL CONVERGED: NO** **COARSE MODEL CONVERGED: YES**	**FINE MODEL CONVERGED: YES** **COARSE MODEL CONVERGED: YES**
// given: new coarse cplData from solvers H(x) measureConvergence(coarseModel) → false _coarseModelOptimizationActive ← true _MMPostProcessing.performPP(cplData) _coarseOptimization.optimize(cplData, q_k) RegisterSolution() // store coupling data for conv. measure and extrp // update time and iteration counts	// given: new coarse cplData from solvers H(x) measureConvergence(coarseModel) → true _coarseModelOptimizationActive ← false _doOnlySolverEvaluation ← true	// given: new coarse cplData from solvers H(x) measureConvergence(coarseModel) → true _coarseModelOptimizationActive ← false _doOnlySolverEvaluation ← true
// fluid solver: readBlockScalarData(cplReadData) mapDown(cplReadData) evaluateCoarseModel() mapUp(cplWriteData) writeBlockScalarData(cplWriteData) // to coarse cplData IDs writeBlockScalarData(cplWriteData) // to fine cplData IDS **// solid solver:** readBlockScalarData(cplReadData) mapDown(cplReadData) evaluateCoarseModel() mapUp(cplWriteData) writeBlockScalarData(cplWriteData) // to coarse cplData IDs	**// fluid solver:** readBlockScalarData(cplReadData) evaluateFineModel() writeBlockScalarData(cplWriteData) // to fine cplData IDs **// solid solver:** readBlockScalarData(cplReadData) evaluateFineModel() writeBlockScalarData(cplWriteData) // to coarse cplData IDs	**// fluid solver:** readBlockScalarData(cplReadData) evaluateFineModel() writeBlockScalarData(cplWriteData) // to fine cplData IDs **// solid solver:** readBlockScalarData(cplReadData) evaluateFineModel() writeBlockScalarData(cplWriteData) // to coarse cplData IDs
	// given: new fine cplData from solvers H(x) measureConvergence(fineModel) → false _doOnlySolverEvaluation ← false _MMPostProcessing.performPP(cplData) _coarseOptimization.iterationsConverged() UpdateDifferenceMatrices() // F and C updateCoarseModelDesignSpecification(q_k) _coarseModelOptimizationActive ← true _coarseOptimization.optimize(cplData, q_k) RegisterSolution() // store coupling data for conv. measure and extrp // update time and iteration counts	// given: new fine cplData from solvers H(x) measureConvergence(fineModel) → true _doOnlySolverEvaluation ← false _MMPostProcessing.iterationsConverged(cplData) _coarseOptimization.iterationsConverged() updateDifferenceMatrices() // F and C updateCoarseModelDesignSpecification(q_k) _coarseModelOptimizationActive ← true // store coupling data for conv. measure and extrp // update time and iteration counts