Modeling and CAPE-OPEN

How CAPE-OPEN technology may help in the development and maintenance of models?

CAPE-OPEN Laboratories Network

2nd US Annual CAPE-OPEN Meeting

☐ **Linking Fluent to process simulators**

  ➲ **Increased usage by US DOE**

  ➲ **New Vision 21 project incorporates CO technology**

☐ **CO compliant process simulator from US EPA**

  ➲ **Released as open source**

☐ **Demonstration of increased interoperability in thermodynamics and unit operations**

☐ **IPOPT NLP optimizer made CO compliant by CMU**

☐ **Commitment by Honeywell on UniSim CO features**

Use rigorous thermodynamics in MATLAB through SIMULIS

Properties and equilibrium calculations

Client requirement

Simulis® Thermodynamics

CAPE-OPEN

Property Package

Aspen Properties, PPDS, …

Simulis Package

CAPE-OPEN Property Package

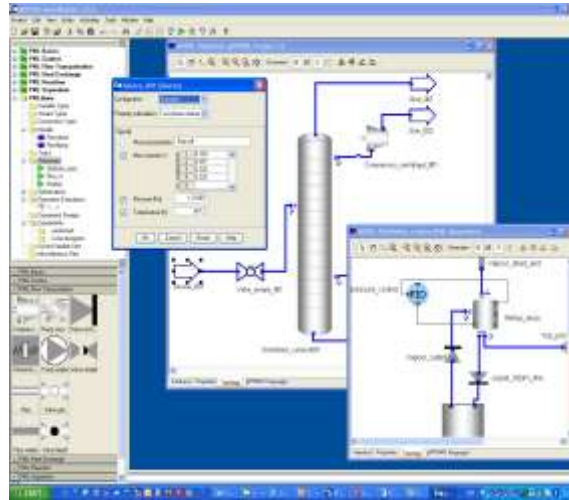*Data and results consistency between the different tools…*

Concentrate on what is really the core a modeling activity…
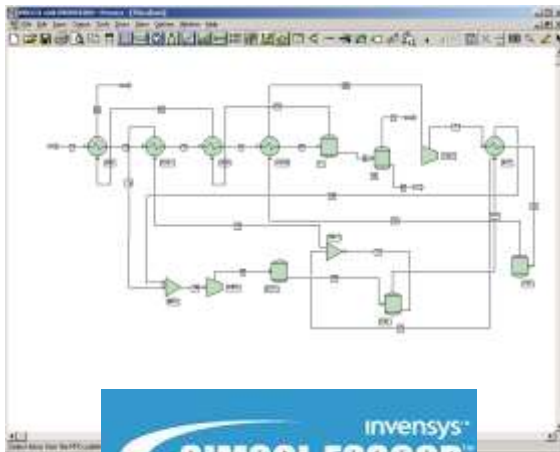
Aspen Plus, PRO/II, gPROMS, …

PSe

gPROMS ModelBuilder

Making advanced models deployable

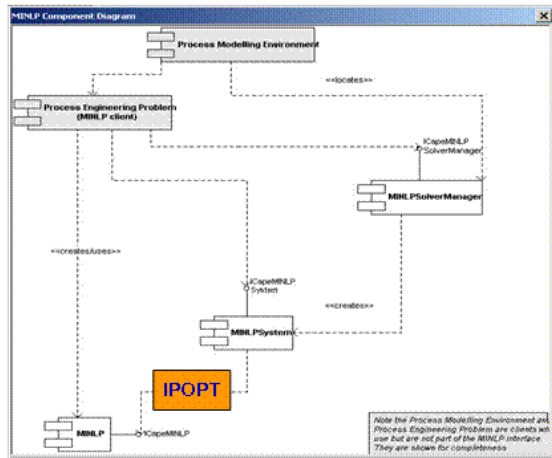
gO:CAPE-OPEN
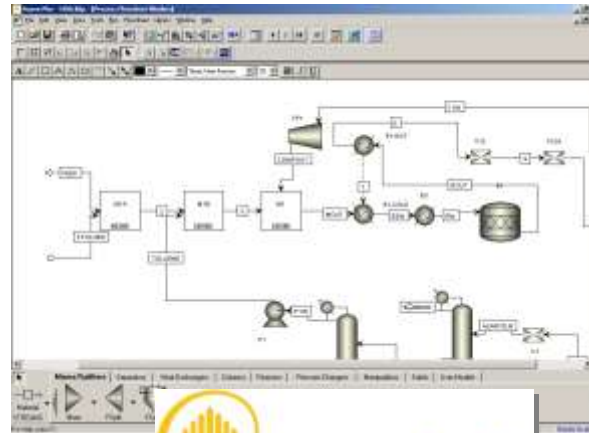
User Meeting 2005

IPOPT NLP Solver from CMU

□ **State of the art algorithm**

□ **Made CO Compliant as a COM component**

**Tested for CO compliance
In the CO Tester**