Modeling and CAPE-OPEN

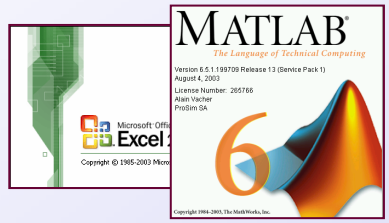
How CAPE-OPEN technology may help in the development and maintenance of models?

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

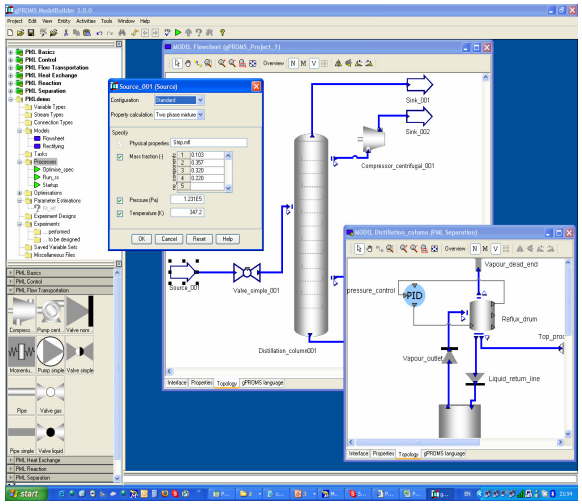
Data and results consistency between the different tools…

Concentrate on what is really the core a modeling activity…

Aspen Plus, PRO/II, gPROMS, …

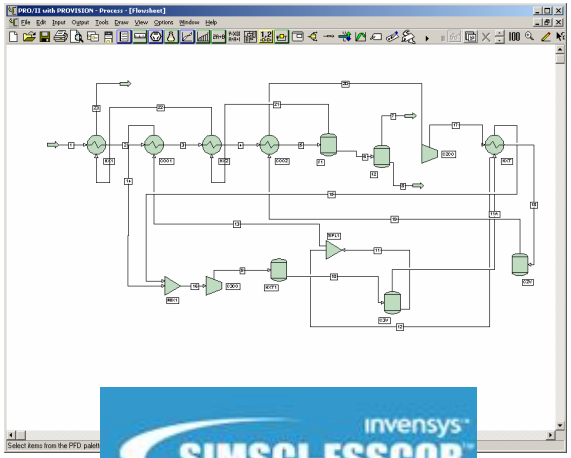
gPROMS CAPE-OPEN Unit Operation

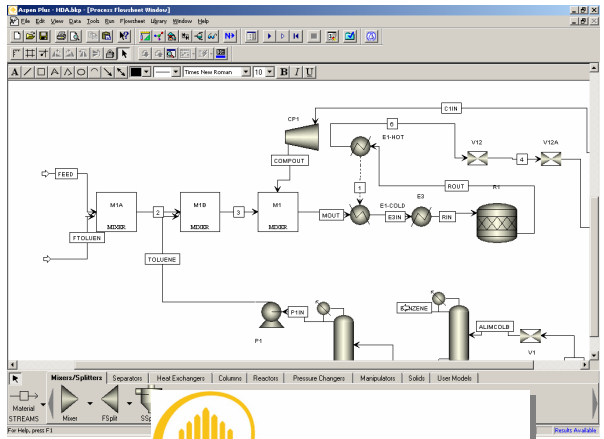
gPROMS ModelBuilder



Making advanced models deployable

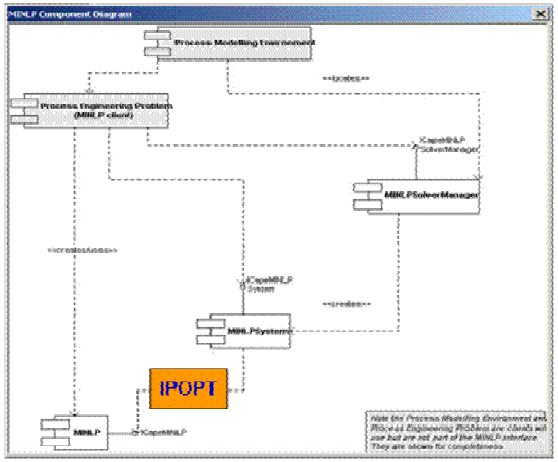
gO:CAPE-OPEN

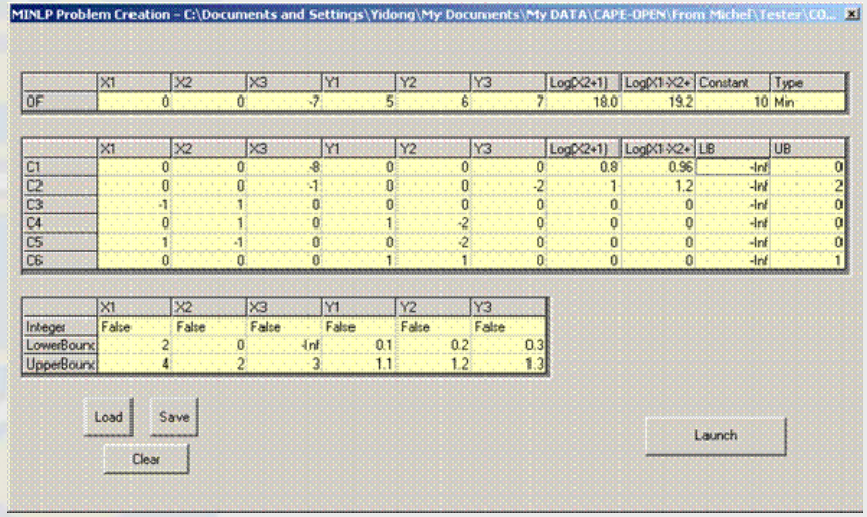




IPOPT NLP Solver from CMU

- State of the art algorithm
- Made CO Compliant as a COM component





Tested for CO compliance In the CO Tester