

A Revolution in Performance

# PRO/II's® Progress with CAPE-OPEN

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# Agenda

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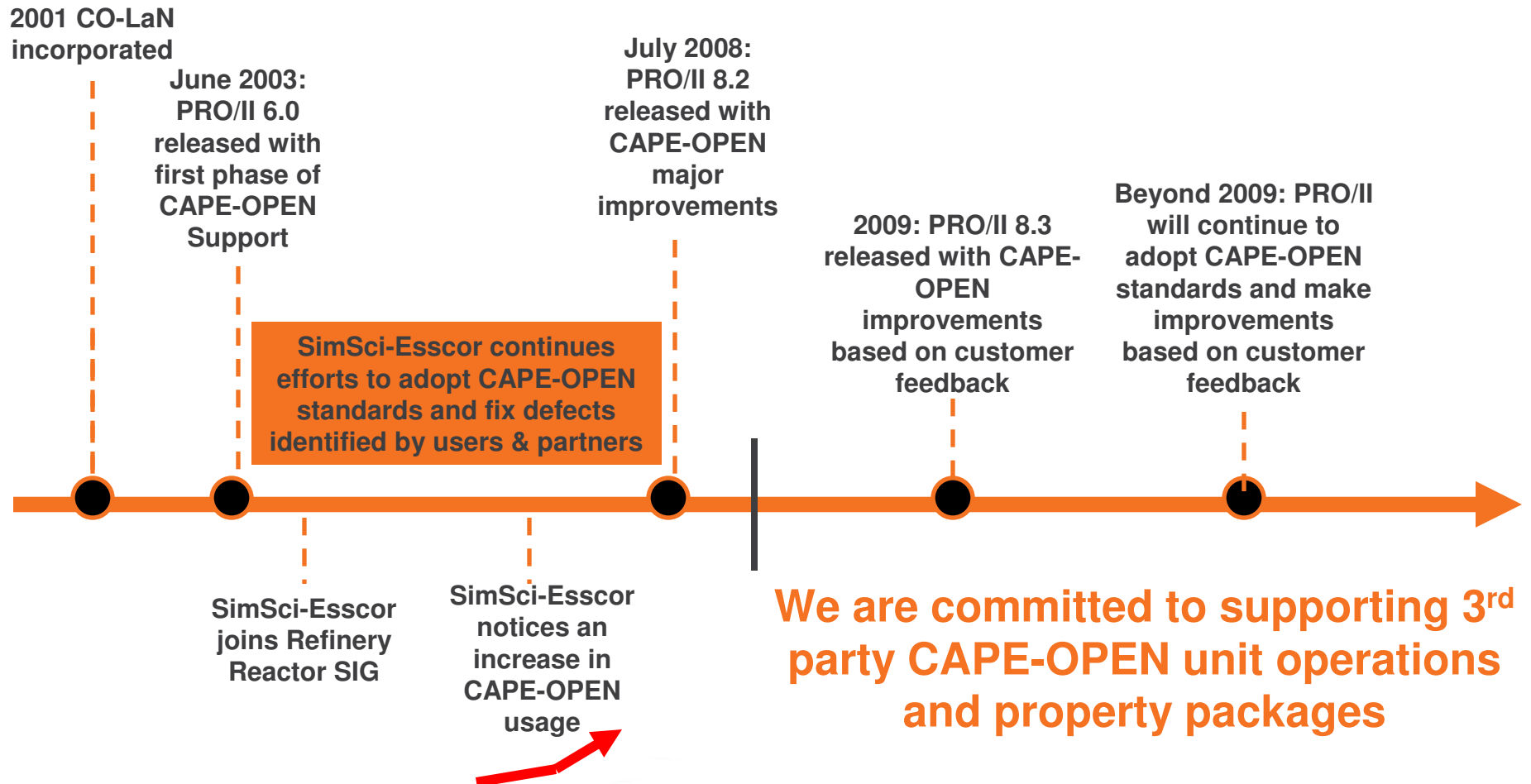
- **PRO/II**
- **Development Overview**
- **Current Support**
- **Future Plans**
- **Questions**

# What is PRO/II?

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- **Steady-state simulator performing rigorous mass and energy balances for a wide range of processes**
  - Refining
  - Petrochemical
  - Chemical
  - Gas Processing
- **Simulation Applications**
  - Design new processes.
  - Evaluate alternate plant configurations.
  - Modernize and revamp existing plants.
  - Assess and document compliance within environmental regulations.
  - Troubleshoot and debottleneck plant processes.
  - Monitor, optimize, and improve plant yields and profitability
- **Process Modeling Environment (PME)**

# Development Overview



# Current Support

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- **“Socket” vs. “Plug”**
  - PRO/II provides the "sockets" for third-party CAPE-OPEN unit/thermo components.
  - PRO/II does not create CAPE-OPEN units or thermo to "plug" into other simulators.
- **In-process (dll) and out-of-process (exe) COM-based thermo/unit components are supported.**
- **COM-based components can be written in many languages, such as C++, Visual Basic, and C#.**
- **CORBA-based components are not supported.**

# Current Support

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- **CAPE-OPEN Property Packages v1.0**

- PRO/II can call out to third-party CAPE-OPEN property packages to calculate stream properties
- Third-party CAPE-OPEN unit operations can use PRO/II thermodynamic systems or CAPE-OPEN property packages at calculation time through the Material Object interface
- Native PRO/II unit operations can use CAPE-OPEN property packages when performing equilibrium and property calculations on streams

- **CAPE-OPEN Unit Operations v0.9-3 and v1.0**

- Calculate Unit
- Display custom GUI
- Save persistent state into the .prz file

# Examples

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- **Property Packages**

- Simulis
- PPDS
- MultiFlash
- VMG Thermo
- TEA (COCO)

- **Unit Operations**

- HTRI Xchanger Suite
- gProms
- ChemSep
- COUSCOUS (COCO)

# Future Plans

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- **PRO/II 8.3**

- Enhancements

- Ability to use real parameters from CAPE-OPEN unit operations in PRO/II's specification, define, & vary layer

- **PRO/II 9.0 & beyond...**

- Adoption of new standards

- CAPE-OPEN Property Packages v1.1

## Common Questions:

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- **When will you support v1.1 of the Thermo interface?**
  - Planned for PRO/II 9.0 in 2009/2010
- **Will the Thermo 1.1 interface support multiple liquid phases (VLLE)?**
  - Yes
- **Will the Thermo 1.1 interface support solid phases?**
  - Initially No, but over time, yes.

## Common Questions:

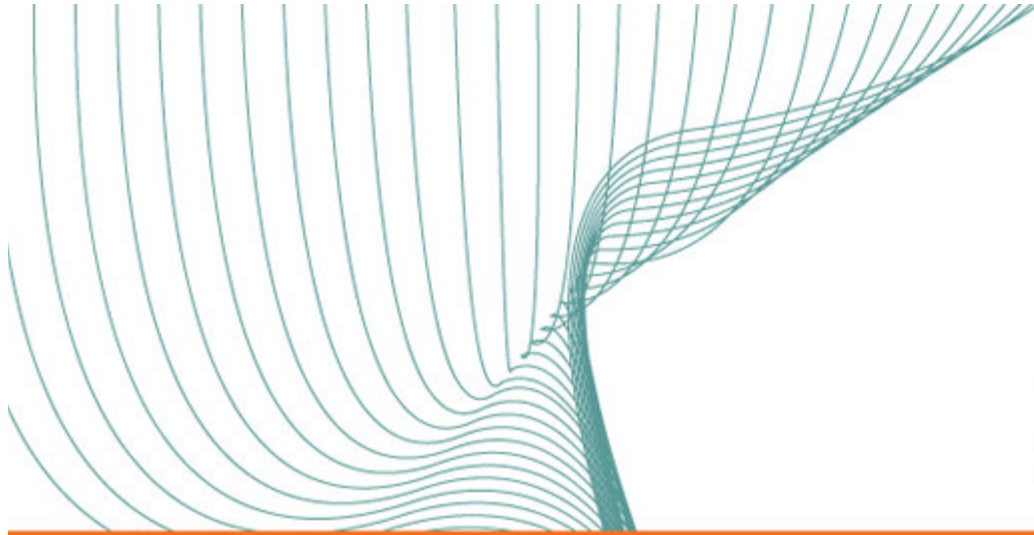
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- **Will you expose SimSci-Esscor Thermo as a property package for use by other PME's?**
  - We are currently evaluating this as a business decision
- **Do you have plans to support CAPE-OPEN in your other products?**
  - Dynsim
  - ROMeo

# SimSci-Esscor Commitment

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**We are committed to supporting 3rd party CAPE-OPEN  
unit operations and property packages**



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**Questions?**

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