

# CO-LaN Annual Meeting

CAMBRIDGE, UK

April 3, 2008

Unit SIG Report

*Richard Baur*

Shell Global Solutions International B.V.



# Unit SIG members

- Jasper van Baten, AmsterCHEM
- Richard Baur , Shell Global Solutions B.V.
- Morten Hyllseth, Kongsberg
- Tommi Karhela, VTT
- Tom Ortiz, HTRI
- Didier Paen, RSI
- Donald Perreira, BP plc
- Pascal Roux, IFP
- Alain Vacher, PROSIM
- Lars von Wedel, AixCAPE
- Tom Williams, PSE Ltd.
- Ensheng Zhao, Honeywell Process Solutions

# Charter

## Charter:

- **Develop, maintain and promote unit operation interface specifications**

## Key Responsibilities:

- **Maintain and manage existing interface specifications (revisions to improve design, performance/speed and robustness based on user input)**
- **Assess and prioritize on expansions of interface specifications**
- **Prioritize registered issues and give recommendations on how they may be resolved**
- **Promote and support the use of the CAPE-OPEN interface for Unit Operations**



# 2007 Priorities & Status

## DYNAMIC UNIT INTERFACE

- **Consensus found for**
  - ⇒ **Generic definition of an Arc**
  - ⇒ **Mass & molar basis**
  - ⇒ **Information returned from the Nodes & Arcs**
  - ⇒ **Time stepping strategy**
  - ⇒ **Initial state method**
  
- **Added several new interfaces & use-cases**
  
- **Revision of the document**

# 2007 Priorities & Status

## UNIT OPERATION INTERFACE

### □ Clarifications & updates:

- ⇒ Usage of validate method
- ⇒ Comprehensive update of the document (removal of outdated interfaces & use-cases).

### □ Extensions to the standards:

- ⇒ Energy and Information Ports

First implementations: PROSIM & COCO



# 2007 Priorities & Status

## PARAMETER COMMON INTERFACE

### □ Clarifications:

- ⇒ Minimum support of parameter arrays
- ⇒ Dimensionality in ICapeParameterSpec (work in progress)

# 2008 Plan

- **DYNAMIC UNIT OPERATIONS:** Final review of current draft. Resolve last remaining issues & start approval process.
- Start of approval process for updated **UNIT OPERATION** and **COMMON PARAMETER** interface standards.
- Prioritize potential extensions to the standards (e.g. reaction interface, equation-oriented units, refinery reactor units, partial convergence).