

CO-LaN Annual Meeting

Cannes, France
09-03-2006

Unit SIG Report
Richard Baur
Shell Global Solutions International B.V.



Unit SIG members

- ◆ David Cameron, Fantoft Process
- ◆ Tommi Karhela, VTT
- ◆ Ben Keeping, Process Systems Enterprise (PSE) Ltd.
- ◆ Costas Pantelides, PSE and Imperial College
- ◆ Pascal Roux, IFP
- ◆ Didier Paen, Realisation en Systemique Industrielle
- ◆ Donald Perreira, BP plc
- ◆ Marcel van Maasdam, Shell Global Solutions B.V.
- ◆ Richard Baur , Shell Global Solutions B.V.



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**



2005 Priorities & Status

Dynamic Unit Interface

- ◆ **Pilot implementation in INDISS (RSI): *Didier Paen***
 - ⇒ IFP pipe model is running in INDISS (demo follows in tomorrow's session)

- ◆ **Pilot implementation in D-SPICE (Fantoft Process): *David Cameron***
 - ⇒ First version of the interface

- ◆ **Complete specification document (PSE Ltd): *Ben Keeping***
 - ⇒ Done. Ready for approval process



2005 Priorities & Status

Steady State Unit (demos follow)

- ◆ **UNIT implementation in gPROMS (PSE)**
 - ⇒ CAPE-OPEN Unit socket applied in the VPDM project
- ◆ **UNIT implementation in UniSim**
 - ⇒ CAPE-OPEN Thermo & Unit Operation
- ◆ **Testing environment COCO (AmsterChem)**
 - ⇒ Interoperability tests: e.g. ChemSep
- ◆ **Open Source PMCs & PME (US EPA)**
 - ⇒ Based on .Net technology

Dissemination

- ◆ **WCCE7 paper (World Congress of ChemEngng 7, Glasgow)**
Presentation by Didier Paen



2006 Plan

- ◆ **Approve and publish the interface specifications for dynamic unit operations for v1.0**
- ◆ **Finalization of D-Spice CAPE-OPEN interface**
 - ⇒ **Demo including dynamic units**
- ◆ **Review the standards**
 - ⇒ **Equation oriented unit operations**
 - ⇒ **Termination, tracing, reporting and interrupts**



Contributions

- ◆ **16:10 - 16:30 gPROMS CAPE-OPEN**
Unit socket as applied in the VPDM project
Organization: *Process Systems Enterprise*
Presenter: *Thomas Williams*
- ◆ **16:30 - 16:50 ChemSep in motion**
Organization: *ChemSep*
Presenter: *Harry Kooijman*
- ◆ **16:50 - 17:10 Custom Process Unit Models in a Flowsheet Simulator - User Experiences**
Organization: *The Dow Chemical Company*
Presenter: *Wilma Hensen*
- ◆ **17:10 - 17:30 The use of CAPE-OPEN modules - demonstrated in Aspen Plus**
Organization: *IVC-SEP, Technical University of Denmark*
Presenter: *Dr. Martin Breil*

