

CO-LaN Annual Meeting

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Unit SIG Report
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Unit SIG members

- ◆ Jasper van Baten, AmsterCHEM
- ◆ Richard Baur , Shell Global Solutions B.V.
- ◆ David Cameron, Fantoft Process
- ◆ Tommi Karhela, VTT
- ◆ Tom Ortiz, HTRI
- ◆ Didier Paen, Realisation en Systemique Industrielle
- ◆ Donald Perreira, BP plc
- ◆ Pascal Roux, IFP
- ◆ Lars von Wedel, AixCAPE
- ◆ Tom Williams, Process Systems Enterprise (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**



2006 Priorities & Status

Dissemination

- ◆ Baur, R., van Baten, J.M., Kooijman, H., Drewitz, W., Cross Platform Modeling of Chemical Processes with CAPE-OPEN , NPT, 4, 22-24 (2006)

Dynamic Unit Interface

- ◆ Added comprehensive introduction on sequential dynamic simulator & terminology
- ◆ Added several use-cases
- ◆ Current items under discussion:
 - ⇒ Mole / mass basis of flows
 - ⇒ Generic definition of an Arc
 - ⇒ Information returned from the Nodes & Arcs
 - ⇒ Time stepping strategy
 - ⇒ Initial state method



2006 Priorities & Status

Steady State Unit

◆ Energy and Information Ports

- ⇒ Requirement on COSE: implement stream objects
→ ICapeCollection exposing parameters (as opposed to the ports, ICapeCollection → ICapeParameterSpec objects)

◆ Update of the Interface Standards

- ⇒ Removal of inconsistencies, outdated comments and references

◆ Implementation related recommendations

- ⇒ Minimum support for parameter arrays



2007 Plan

- ◆ **Review current draft of the dynamic unit operations interface standards for its generic validity and start the approval process.**
- ◆ **Update of the unit interface specification document. The document will also include standards for energy and information ports.**
- ◆ **Prioritize potential extensions to the standards (e.g. equation-oriented units, refinery reactor units, partial convergence).**

