

# CO ▼ LaN

# CO-LaN Status Report for 2005

**Werner Merk**  
**Bertrand Braunschweig**

**March 9, 2006**



# Member Participants

- ◆ *Air Liquide*
- ◆ AixCAPE e.V.
- ◆ AmsterCHEM
- ◆ *AspenTech*
- ◆ BASF AG
- ◆ BP
- ◆ CASPEO
- ◆ ChemSep
- ◆ Cosmologic GmbH
- ◆ CPERI
- ◆ Dow
- ◆ DTU- IVCSEP
- ◆ Fantoft
- ◆ Hans-Horst MAYER
- ◆ Honeywell
- ◆ HTRI
- ◆ IFP
- ◆ Infochem
- ◆ ProSim SA
- ◆ Process Systems Enterprise
- ◆ RSI
- ◆ Shell Global Solutions
- ◆ SimSci-Invensys
- ◆ SimTech
- ◆ Technical Univ. Hamburg
- ◆ TÜV-NEL
- ◆ US EPA



# Agenda for today

- ◆ **08:30 Annual General Meeting of CO-LaN Members**
  - Meeting introduction, report on CO-LaN activities, 2005 financial statement, 2006 provisional budget, election
  - General discussion
- ◆ **09:30 Interoperability Showcase Session 1**
  - Interoperability Support SIG report by Peter Banks (BP)
- ◆ **12:30 Lunch**
- ◆ **14:00 Interoperability Showcase Sessions 2&3**
  - Thermo SIG report by Werner Drewitz (BASF AG)
  - Unit SIG report by Richard Baur (Shell Global Solutions)
- ◆ **17:30 Close**
- ◆ **19:30 Conference dinner with CO Award ceremony**



# Outline

- ◆ **Activities in 2005 (Werner Merk)**
  - ⇒ **Membership, BOD, Contracts**
  - ⇒ **Action review per mission**
- ◆ **Approval of Status report**
- ◆ **Financial Report for 2005 (B. Braunschweig)**
- ◆ **Approval of Financial report**
- ◆ **Proposals for 2006 (B. Braunschweig)**
- ◆ **Approval of budget**
- ◆ **Board election**
- ◆ **General discussion**



## Activities in 2005

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# Membership as of March 2006

- ◆ CO-LaN is 53 members strong (+ 11 compared to Como)
  - ⇒ 7 Full Members



- ⇒ 46 Associate Members (2005, 2006)

- 28 software editors
  - AixCAPE e.V., BelSim, CASPEO, ChemStations, Honeywell, SimTech, SHMA
- 14 universities
  - Max-Planck Institute, SINTEF, The Tulsa University, Zhejiang University
- 2 US Federal agencies
- 2 individuals



# MB Activities in 2005

## ◆ Management Board (+ SIG leaders invited)

• Dow	W. Merk	President
• IFP	B. Braunschweig	Treasurer
• BP	P. Banks	Secretary
• BASF	R. Klein	Member
• Shell Global Solutions	R. Dickinson	Member
• Total	J. Bousquet	Member
• Dow	K. Irons	Member
• BP	M. Woodman	Member

## ◆ Monthly conference calls or meetings

- ⇒ Address 5 missions of CO-LaN
- ⇒ Votes for accepting new members
- ⇒ Decision making



## Revised Vision Statement

# *Expanding Process Modelling Capability through Software Interoperability Standards*



# SIG Management

- ◆ **Clarification of SIG Charters**
  - ⇒ **Unit SIG**
  - ⇒ **Thermo SIG**
  - ⇒ **Interoperability Support SIG**
- ◆ **Methods & Tools SIG (Bertrand Braunschweig)**
  - ⇒ **Created with initial focus on .NET**
- ◆ **Refinery Reactor Model SIG (Ignasi Palou-Rivera)**
  - ⇒ **Scope developed**

# Contracts/Services

## ◆ Awarded by CO-LaN

- Michel Pons Technologie for CTO activities in 2006
- SHMA for CO Logging & Testing Tool development

## ◆ Licenses formally granted for testing and demo purposes

- A+, HYSYS, Distil, ComThermo renewed by AspenTech
- VALI by BelSim SA
- *UniSim Design by Honeywell*
- MultiFlash by Infochem
- gPROMS by Process Systems Enterprise
- SIMULIS Thermodynamics by ProSim SA
- INDISS by RSI
- PRO/II renewed by SimSci-Esscor
- PPDS by TÜV-NEL
- Xchanger Suite by HTRI

## ◆ Other software (e.g. COCO, SolidSim, IVCSEP)



# Consultancy Scheme (User priority mission)

## ◆ Objectives

- ⇒ Assist developers
- ⇒ Secure CAPE-OPEN expertise

## ◆ Accomplishments in 2005

- ⇒ CO Logging & Testing Tool specification
- ⇒ CosmoTHERM

## ◆ Available capacity for 2006. Use it!



# Dissemination actions (Mission 2)

- ◆ CAPE-OPEN Award 2004
- ◆ CO Update #10
- ◆ Conference participation
  - ESCAPE-15: Consultancy scheme
  - PSE User Meeting: gO:CAPE-OPEN
  - ICheAp-7: Support tools
  - AIChE Annual Meeting (Cincinnati): CO Simulis and MATLAB
  - EUROKIN workshop
  - World Congress of Chemical Engineering: dynamic UNIT spec
- ◆ 2nd US CAPE-OPEN Meeting at US NETL
- ◆ Journal papers by CO-LaN
  - NPT Procestechologie, Oil&Gas Science Technology Journal
- ◆ Visits (some funded directly by TOTAL)
  - NETRAL, Akzo Nobel Chemicals, Scandpower, Petroleum Experts, Rhodia, Gaz de France, CEA, The University of Tulsa



# Papers about CAPE-OPEN

## ◆ World Congress of Chemical Engineering

- Paper 84348 (Oral 121-002): “Towards a Distributed High-Performance Computing Environment for CAPE-OPEN Standard” by Laurent PIGEON, Laurent TESTARD, Thierry GAUTIER, Pascal ROUX.
- Paper 85318 (Oral 121-003): “Grid Computing in Integrated Computer-Aided Solvent and Process Design” by Athanasios I. PAPAPOULOS and Patrick LINKE, University of Surrey. 43 pages.
- Paper 86816 (Poster C3-009): “SolidSim – A new system for the flowsheet simulation of solids processes”, by Ernst-Ulrich HARTGE, Matthias POGGODA, Claus REIMERS, Daniel SCHWIER, Günter GRUHN, Joachim WERTHER.
- Paper 86968 (Oral 145-002): “A CAPE-OPEN compliant object for large-scale nonlinear programming” by Y.D. LANG and Larry BIEGLER, Carnegie Mellon University.
- Paper (Poster 18-034): “On-line optimisation control of large-scale chemical process” by P.A ROLANDI, J.A. ROMAGNOLI, The University of Sydney.

## ◆ ESCAPE-15

- IA-011: “Pharmaceutical Informatics: A Novel Paradigm for Pharmaceutical Product Development and Manufacture”.
- Paper IA-003: “Design Synthesis for Simultaneous Waste Source Reduction and Recycling Analysis in Batch Processes”.
- Paper CM-059: “Numerical Analysis of Higher-Order Singularities in Complex Chemical Process Models on ProMoT”.
- Paper PL-01: “Enterprise-wide Decision Support Systems: PSE Contributions & Promise”.
- Paper IA-018: “A Library for Equation System Processing based on the CAPE-OPEN ESO Interfaces”
- Paper MS-132: “A CAPE-OPEN based framework for process simulation solutions integration”.
- Paper PO-085: “A Framework for On-line Full Optimising Control of Chemical Processes”

## ◆ Computers & Chemical Engineering Journal

- “Development of a chemical process modeling environment based on CAPE-OPEN interface standards and the Microsoft .NET framework” by Bill Barrett and Jun Yang, 30 (2005), pp 191-201.



# Website

- ◆ **Successful move to new hosting provider**
  - ⇒ **Minimum disruption of service**
- ◆ **Expansion of members area**
  - ⇒ **Management Board page**
    - **Highlights of monthly meetings**
  - ⇒ **Pages for each SIG**
    - **Minutes of meetings**
    - **Issues discussion board (Thermo)**
    - **Downloadable material (Interoperability)**
- ◆ **Updating of public pages**
  - ⇒ **29 News items in 2005**



## Other missions

- ◆ **Mission 3: Standards maintenance (specifications)**
  - ⇒ To be discussed during Showcase
- ◆ **Mission 4: Testing**
  - ⇒ To be discussed during Showcase
- ◆ **Mission 5: Training facilitation**
  - ⇒ ProSim SA delivered a CAPE-OPEN training session to Rhodia. No direct participation from CO-LaN.

## Vote on status report for 2005

Supported by all Full Members present





# Financial report for 2005

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# Overview of resources available

	2005
<b>Member fees</b>	<b>70,000 €</b>
<b>Bank interest</b>	<b>2,200 €</b>
<b>Accumulated funds</b>	<b>154,000 €</b>
<b>Available</b>	<b>226,200 €</b>

## 2005 expenses & revenue

2005 Expenses	
CTO Salary+Charges	34000
Dissemination	15000
Contracts (Aspentech & SHMA)	34000
AGM Expenses	4400
Other (website, etc.)	3200
Total	90600

2005 Revenues	
Membership Fees	70000
Bank interest	2200
Deficit	-18400

# Summary of 2005 budget

- ◆ Accumulated funds 1.1.05: 154 K€
- ◆ Expenses: 90,6 K€
- ◆ Income: 72 K€
- ◆ Deficit: 18,4 K€
- ◆ Accumulated funds 31.12.05: 136 K€

## Vote on 2005 financial report

- ⇒ Approval of income/expenditures  
Approved by all Full Members present
- ⇒ Approval of transfer of deficit  
from accumulated funds  
Approved by all Full Members present





## Proposals for 2006

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## Overall view for 2006

- ◆ **Contract MPT for technical leadership activities**
- ◆ **Complete AspenTech consultancy actions**
- ◆ **Development & maintenance of support tools**
- ◆ **Polish and publish existing SIGs work**
  - ⇒ **Dynamic UNIT and Thermo 1.1**
- ◆ **Creation of new SIGs**
  - ⇒ **Methods & Tools**
  - ⇒ **(Refinery Reactor Model)**
- ◆ **Dissemination policy**
  - ⇒ **Maintain and develop US**
  - ⇒ **Identify Asia and Middle East opportunities**
  - ⇒ **Engineering contractors**



# Budget for 2006

- ◆ **Total expenses: 100 K€**
  - ⇒ **CTO contract: 42 K€**
  - ⇒ **Aspen Tech consultancy contract: 13 K€**
  - ⇒ **Software development work: 20 K€**
  - ⇒ **Dissemination: 15 K€**
  - ⇒ **AGM expenses: 4 K€**
  - ⇒ **Accounting: 3 K€**
  - ⇒ **Miscellaneous operating expenses: 3 K€**
- ◆ **Provision for taxes: 30 K€**
- ◆ **Total revenues: 70 K€**
- ◆ **Expected deficit: 60 K€**

# 2006 Dissemination events

- ◆ **AIChE Annual Meeting, San Francisco, US**
  - ⇒ **Topical Conference (4 sessions)**
    - **Overall progress**
    - **Unit interfaces**
    - **Thermo interfaces**
    - **Numerical interfaces**
  - ⇒ **As 3rd US CAPE-OPEN Annual Meeting**
    - **Consider sending Proposals to Present till May 1**
- ◆ **Others**
  - ⇒ **PSE Annual Meeting**
  - ⇒ **SIMO'2006**



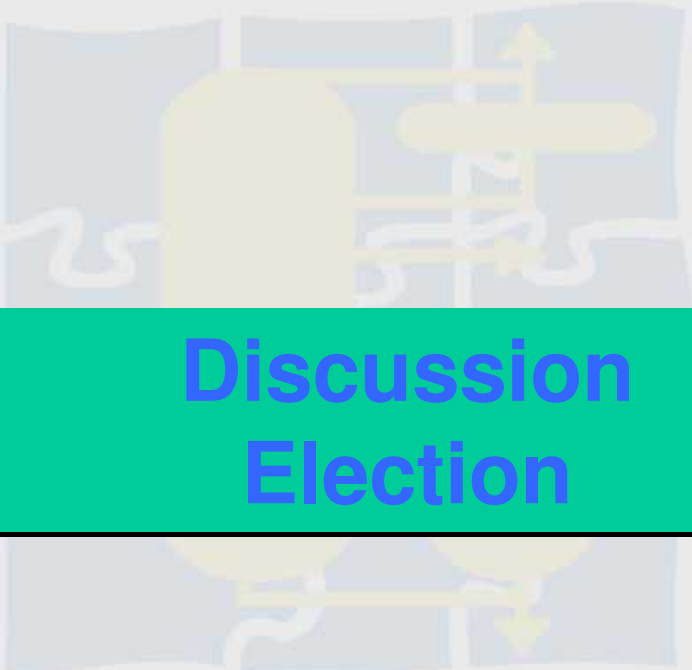
## 2006 Account balance

- ◆ Accumulated funds: **136 K€**
- ◆ Expenses: **130 K€**
- ◆ Income: **70 K€**
- ◆ Deficit: **60 K€**
- ◆ Projected accumulated funds 31.12.06: **76 K€**

## Vote of 2006 budget

Approved by all Full Members present





# Discussion Election

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# Proposed Management Board 2006

- ◆ **Dow:**
  - ⊖ Werner Merk (President)
  - ⊖ Kerry Irons (Member)
- ◆ **Shell:**
  - ⊖ Ray Dickinson (Vice-President)
- ◆ **IFP:**
  - ⊖ Bertrand Braunschweig (Treasurer)
- ◆ **BP:**
  - ⊖ Peter Banks (Secretary)
  - ⊖ Malcolm Woodman (Member)
- ◆ **BASF:**
  - ⊖ Ronald Klein (Member)
- ◆ **TOTAL:**
  - ⊖ Jacques Bousquet (Member)

Approved



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**Werner Merk**

**Bertrand Braunschweig**

**March 9, 2006**

