CO-LaN Status Report for 2005

Werner Merk

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

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

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**

Expanding Process Modelling Capability through Software Interoperability Standards

❑ **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 Procestechnologie, 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 (0ral 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. PAPADOPOULOS 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.**