



Dr Michel PONS
CAPE-OPEN Laboratories Network
32 rue Raulin
F-69007 LYON
FRANCE
www.colan.org

**3rd US Annual CAPE-OPEN meeting
as AIChE 2006 Annual meeting
Topical Conference**

**Presentation at 10e Programming Meeting
Tuesday Nov 1st, 2005**

- **CAPE-OPEN / CO-LaN**
- **Previous events in the US**
 - ⇒ **1st and 2nd US Annual CAPE-OPEN meetings**
- **Proposed Topical Conference**
 - ⇒ **Organization**
 - ⇒ **Sessions**
- **Conclusion**

- **A freely available industry standard for interfaces between software components making up process simulation tools**
- **The success of a collaboration between software vendors, end-users and academics**
- **A proven technology implemented in most process simulation tools**
- **A growing adhesion by process simulation market leaders**
- **CO-LaN: a group of end users taking responsibility for putting resources together to support ongoing work on the standard**

48 members as of November 2005



- 23 Software suppliers
- ◆ 7 Operating Companies
- ▲ 2 Governmental
- 12 Universities
- ★ 4 Individuals



- **August 24-25, 2004 in Cincinnati, OH**
- **Generously hosted by US EPA (Bill Barrett)**
- **25 participants**
 - ⇒ **9 from universities (36%)**
 - ⇒ **9 from industrial end-user organizations (36%)**
 - ⇒ **3 from Federal agencies (12%)**
 - ⇒ **4 from software vendors (16%)**
- **10 different lecturers**
- **26 presentations in 8 sessions**
 - ⇒ **Collected on a CD handed to all participants**

Excerpt of detailed agenda

0830-1000 Opening remarks, Introduction to CAPE-OPEN from the End User's Perspective

08h30	1.1. Opening	Opening remarks	US EPA, Irons
09h00	1.2 Introduction to CO	Introduction to CO and colan	Braunschweig
09h30	1.3 End users perspective	End user's perspective	Pons, Irons

1000-1020 break

1020-1200 CAPE-OPEN Concepts and Value Generation Opportunities

10h20	2.1 CO concepts	CAPE-OPEN Concepts, usages	Braunschweig
10h45	2.2 ATOFINA Example	Atofina example	Pons
11h45	2.3 Compliant Components	Current compliant components	Pons

1200-1250 Lunch

1250-1420 Architecture of a Chemical Process Simulator and How CAPE-OPEN Fits In

12h50	3.1 AspenTech CO	AspenTech implementation of CAPE-OPEN	Mc Gough
13h20	3.2 PSE CO	PSE implementation	Keeping
13h50	3.3 SimSci CO	SimSci-Esscor implementation	Bluck

1420-1440 Break

- **May 25-26, 2005 in Morgantown, WV**
- **Generously hosted by US DOE (Steve Zitney)**
- **Co-sponsored by Fluent Inc.**
- **50 participants (*up from 25 the previous year*)**
 - ⇒ **16 from universities/research institutes (32%)**
 - ⇒ **10 from industrial end-user organizations (20%)**
 - ⇒ **14 from federal agencies (28%)**
 - ⇒ **10 from software vendors (20%)**
- **15 lecturers (*up from 10 the previous year*)**
- **28 presentations in 8 sessions**
 - ⇒ **Collected on a CD handed to all participants**

Outline of 2nd US Annual CAPE-OPEN meeting

- **Introduction to NETL, CAPE-OPEN and CO-LaN**
- **CO Concepts, Components and Demonstrations**
- **CO-Compliant Process Simulators**
- **CO-Compliant Process Components**
- **Applications/Demos of CO interoperability**
- **Experiences/How-to Advice on CO implementation**
- **Support Tools for CO Component development**
- **CO Future directions and general discussion**

- **3rd US CAPE-OPEN Annual 2006 =**
 - ⇒ **AIChE 2006 Annual Topical Conference**
- **Four sessions**
 - ⇒ **CAPE-OPEN Advances and extensions**
 - ⇒ **Implementations and uses of CO UNIT interfaces**
 - ⇒ **Implementations and uses of CO THRM interfaces**
 - ⇒ **Implementations and uses of CO NUMR interfaces**
- **General purpose**
 - ⇒ **Show the value brought to end-users by CAPE-OPEN technology**
 - ⇒ **Most recent CO implementations in commercial and non-commercial software tools**

□ A distinctive shift in goal:

- ⇒ Eliminates historical background
- ⇒ Eliminates tutorial aspects

□ Focus on what has been realized lately

- ⇒ Chemstations CO compliant Chemcad (PME)
- ⇒ Cosmologic CO compliant component (PMC)
- ⇒ IFP PLATINA platform as CO compliant PME
- ⇒ UNIT socket in gPROMS
- ⇒ Aspen Plus implementation of THRM 1.1
- ⇒ DTU MoT tool with its CAPE-OPEN wrapper
- ⇒ UOP usage of COM Thermo in their unit operation models
- ⇒ Air Liquide usage of Simulis Thermodynamics
- ⇒

- **Topical conference chairs**
 - ⇒ **Michel Pons, CO-LaN**
 - ⇒ **Werner Merk, The Dow Chemical Company**
- **Session chairs: 20+ papers altogether**
 - ⇒ **CAPE-OPEN Advances and extensions**
 - **Michel Pons, CO-LaN**
 - **Bill Barrett, US EPA**
 - ⇒ **CAPE-OPEN UNIT interface implementations and uses**
 - **Fernando Aguirre, HTRI**
 - **Ross Taylor, Clarkson University**
 - ⇒ **CAPE-OPEN THRM interface implementations and uses**
 - **Sanjoy Saha, Honeywell**
 - ⇒ **CAPE-OPEN NUMR interface implementations and uses**
 - **Steve Zitney, NETL, US DOE**
 - **Larry Biegler, Carnegie Mellon University**

Conclusion

- **CAPE-OPEN focus is part of 10e focus**
- **Success of previous US CAPE-OPEN events**
 - ⇒ **Significant growth in participation**
- **Have shown potential for setting up four sessions**
 - ⇒ **20+ papers at both previous events**
 - ⇒ **Need to augment number of authors**
- **Several US organizations already committed to help**
 - ⇒ **US EPA, US DOE, HTRI, Honeywell, Dow**
- **European participation possible**
 - ⇒ **Denmark Technical University, Cosmologic GmbH, Process Systems Enterprise, ...**
- **CO-LaN is definitely seeking CAST 10e approval for a co-sponsored Topical Conference**