

About AIChE's Annual Meeting

November 4-9, 2007.
Salt Lake City, United States.



For R&D professionals, AIChE's Annual Meeting provides an open forum to present papers to fellow engineers and scientists from around the world. For students, the national conference is the ideal place to learn, network and receive recognition. An emphasis of the meeting will be globalization and the diversity of industries the chemical engineering profession serves.

<http://www.aidhe.org/annual>

Registration



Registration is handled by AIChE. Information will be available shortly on their web site.

AIChE

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AIChE®

Short Course

About CO-LaN



CO-LaN (the CAPE-OPEN Laboratories Network) is a neutral industry and academic association promoting open interface standards in process simulation software. CO-LaN members are committed to making Computer Aided Process Engineering (CAPE) easier, faster and less expensive by achieving complete interoperability of CO compliant commercial CAPE software tools. CO-LaN supports and maintain CAPE-OPEN interface standards.

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The CAPE-OPEN standards

CAPE-OPEN is the industry standard for achieving interoperability of process simulation software. It establishes a set of rules and interfaces that allow communication between software components from different sources (software and equipment vendors, universities, or companies).

CAPE-OPEN standards are based on universally recognized software technologies such as COM, CORBA, or .NET. The specifications are open, multiplatform, uniform and available free of charge.

Additional information



CO-LaN

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Development of CAPE-OPEN Unit Operation Models

A hands-on course where you create process model components useable in any process simulator

AIChE Annual Meeting

November 4, 2007
Salt Lake City, Utah / United States

Instructors:

- Lars von Wedel, AixCAPE e.V.
- Bill Barrett, US Environmental Protection Agency



Course Objective

Usage of simulation and calculation software (commercial, academic or developed in-house) is now common in the process industries. The general evolution of this software leads toward the integration of detailed expertise in dedicated applications of relatively small size.

The requirement for improved interoperability and easier integration of these applications is increasingly important as the engineer wishes to be able to choose the most reliable and relevant elements according to the issues he/she is working on, and to assemble them to create a tailored process simulator.

CAPE-OPEN is the industry standard that defines rules and interfaces that allow applications or software components to interoperate.

A large but still growing number of tools employed daily in design and optimization chemical engineering is being developed based on CAPE-OPEN standards today. Among those tools are commercial packages, in-house developments, and academic research prototypes which are all made interoperable by the application of the standard interfaces.

For the educators and researchers who have interest in simulation, this course will help in understanding the fundamental aspects of CAPE-OPEN technologies that constitute the basis of tomorrow's calculation tools.

Agenda

A – Introduction to CAPE-OPEN

Concepts of Process Modelling Environments and Process Modelling Components, of unit operations and property packages. Exercise: using CAPE-OPEN components.

B – Technical aspects of CAPE-OPEN interfaces

What are interfaces, why use them? Realization of interfaces in software: middleware (COM, CORBA, .NET). Most used CAPE-OPEN interfaces. Exercise: launch an existing CAPE-OPEN Unit Operation from code to be written.

C – Process Modelling Components

How does a CAPE-OPEN compliant Unit Operation work? How does a CAPE-OPEN compliant Property Package work? How do these communicate with a simulator as part of a simulation?

D - Exercise

The instructors will help you to develop a CAPE-OPEN compliant unit operation that will demonstrate the achievements of the former session. You can use the code as a starting point for your own developments.

E – Open time

This section will provide you with a chance to discuss technical issues and open questions with the instructors in detail.

Advantages of your participation

This course is particularly relevant for the people involved in software development who wish to make their existing codes comply with the CAPE-OPEN standard, in order to allow them to interact with other applications developed in-house, by universities, or by third parties or commercially available.

This course will help you to understand the basic principles on which the standard is based in order to make the right decisions regarding the software you are using or developing for simulation and optimization of your processes.

For more information, please consult the CO-LaN web site: <http://www.colan.org>.

About the Instructors

William Barrett, US EPA

Bill is a chemical engineer with the US Environmental Protection Agency. Since 2001 he has worked with the US Environmental Protection Agency, Sustainable Technology Division on applications of Computer-Aided Process Engineering aimed at improving the environmental performance of chemical processes.

Lars von Wedel, Managing Director, AixCAPE e.V.

Lars started work in the CAPE-OPEN project in 1997 and has continued to work in CAPE software integration with CAPE-OPEN standards since then. He has developed several CAPE-OPEN compliant components, some of them being used in chemical engineering industries.