

# PROCESSUS DE STANDARDISATION POUR L'INTEROPERABILITE DES COMPOSANTS LOGICIELS DE L'INDUSTRIE DES PROCES

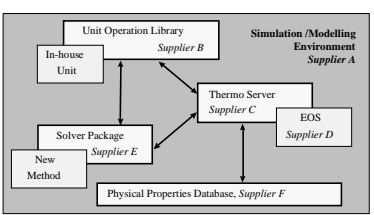
J.P. BELAUD (F), B. BRAUNSCHWEIG (F), M. HALLORAN (UK), K. IRONS (USA), D. PIÑOL (SP), L.V. Wedel (G)



## CAPE-OPEN Initiative

## Benefits from CAPE-OPEN

- Standardisation process for achieving true plug & play of process industry simulation software components
- CO-LaN, [www.colan.org](http://www.colan.org)
- World wide vision
- CAPE-OPEN system
- Cheaper, better and faster design, operation and control of processes

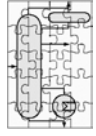


CAPE-OPEN standard is open, multiplatform, uniform and available free of charge

**Benefits for suppliers**  
Increased usage of CAPE tools  
Reduced development costs

**Benefits for users**  
"Develop once, run everywhere"  
Access to best-in-class solutions

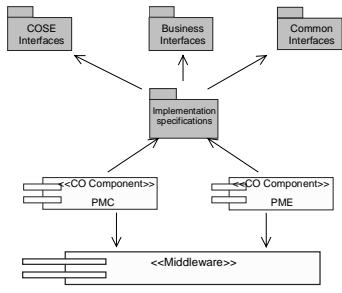
**Benefits for academics**  
Improved dissemination of research results  
Better adaptation to industrial needs



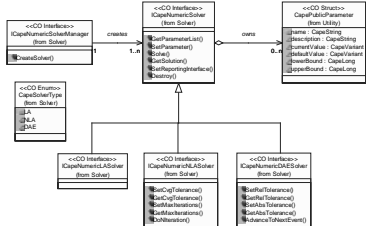
## CAPE-OPEN System

- Relies on proven information technology
- Object-oriented paradigm
  - Distributed component based approach
  - Web-enabled middleware, CORBA and (D)COM
  - UML notation and Unified Processes
  - Object-oriented programming languages
  - Wrapping techniques

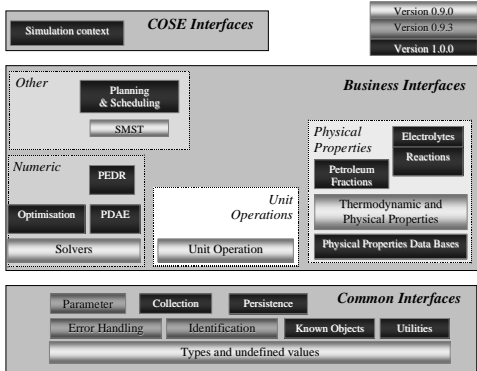
### Architecture reference model



### Example of Solver business interface



## CAPE-OPEN System Public Releases



## CO-LaN

The CAPE-OPEN Laboratories Network

A new actor in CAPE field, through a four-actors co-opetition business model

International not-for-profit organisation for testing and management of CAPE-OPEN

### Missions

- User priorities for CAPE-OPEN standard
- Exploitation and dissemination
- Specifications life cycle management
- Testing, interoperability facilitation
- Training/Migration facilitation

### Membership in 2002

**Industrial users:** Air Liquide, BASF, BP, Dow Chemical, Shell Chemicals, IFP, JGC, Mitsubishi Chemicals, Norsk Hydro, TotalFinaElf, ...  
**Software suppliers:** Dechema, DIPPR, EPCON, Fantoft, Fluent, Infochem, Invensys, PSE, ProSim, Virtual Materials Group, ...  
**Academics:** INPT-ENSIACET-LGC, RWTH, DTU, UPC, ...



## Delivering Compliant Process Engineering Solutions

